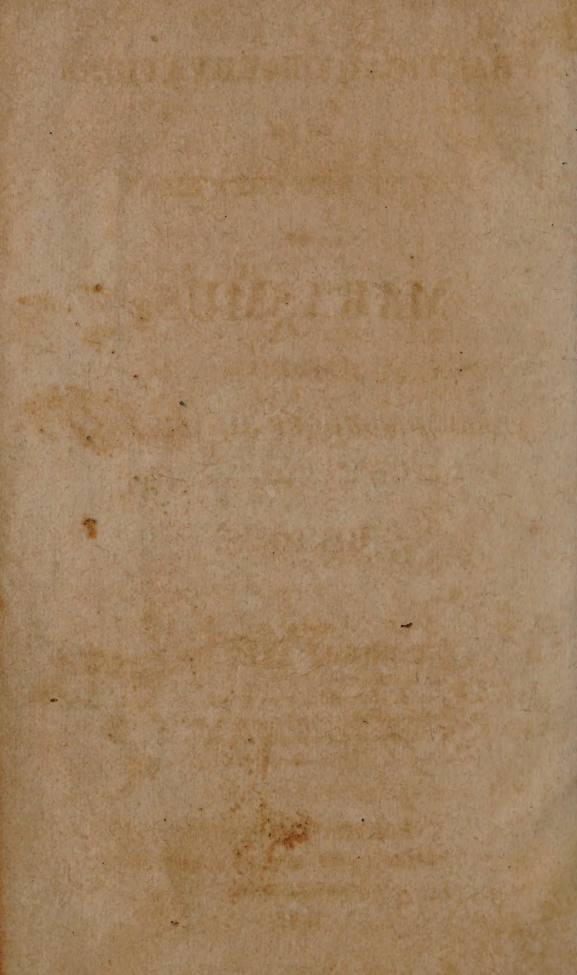


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PRACTICAL OBSERVATIONS
ON THE
NATURE AND TREATMENT
OF
MARASMUS,
AND OF
THOSE DISORDERS ALLIED TO IT,
WHICH MAY BE STRICTLY DENOMINATED
BILIOUS.

BY JOSEPH AYRE, M. D.

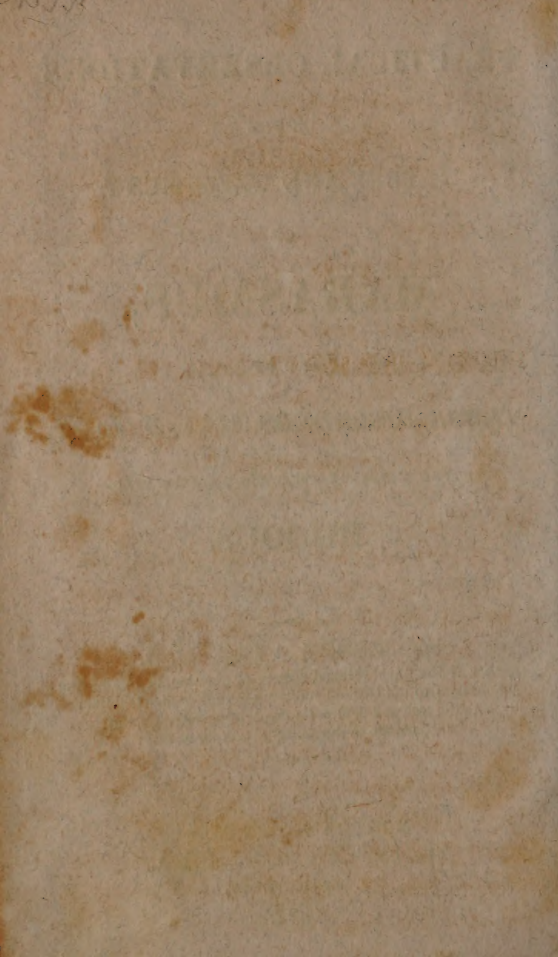
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1822.



Dedication.

TO

JOHN ARMSTRONG, M. D.

ONE OF THE PHYSICIANS TO THE FEVER INSTITUTION,
LONDON.

My Dear Sir,

WERE I required to select an individual, to whom, on public grounds alone, I might present a dedication, I know no one upon whom my choice could more properly fall than upon you. Yet the respect, great as it is, which I entertain for your talents and attainments as a Physician, is not superior to the regard with which I value you as a Friend: allow me, therefore, to offer these few and imperfect pages for your acceptance, as the sincere, but inadequate, testimony of both.

That you may long be spared, to promote by your writings the cause of medical science, and pursue your career of fame and usefulness, is the ardent wish of,

My dear Sir,

Your much obliged

and very sincere friend.

JOSEPH AYRE

Hull, October 16, 1818.

Preface.

EVER since the period, when the attention of medical practitioners became more particularly attracted to the consideration of the disorders of the hepatic system, an erroneous practice has prevailed, and almost grown into a fashion with many, of refering indefinitely the origin of every disorder, where the stomach is concerned, to a derangement in the functions of the liver ; and of considering those symptoms, which are proper to this latter complaint, as indicative of an inflammatory affection, or of an organic disease, of that organ. In the following pages, I have attempted to point out the nature of these and similar errors in its diagnosis, and the practical consequences resulting from them ; and at the same time have endeavoured, by an enumeration of its symptoms, and by a view of its pothology and its mode of treat-

ment, to afford the means by which, I trust, its indications of cure may be more accurately determined, and the disorder itself more readily distinguished.

In the view which I have taken of the *marasmus infantum*, it will be found that I have identified it with the bilious disorder, strictly so named, of adults, or with that which Mr. Abernethy has termed, in his very able work on the subject, a disorder in the digestive organs; and that I have considered it as consisting in an impeded biliary secretion, which gives rise to a venous congestion of the liver, and as standing, in consequence of this congestion, in the relation of a cause to the cholera morbus, and to the idiopathic hæmatemesis and melaena of Nosologists. On these views, is founded the practice by which the cure of marasmus, with the affections arising immediately out of it, is directed; and which consists in removing the congestive state of the liver, by renewing the healthy and natural functions of that organ. To many, the novelty of this practice, in the treatment of melaena and hæmatemesis, may operate as an objection to it; and I cannot,

therefore, but wish it to be understood, that the opinions which led to this practice, have been neither recently nor hastily adopted, nor formed under circumstances unfavourable for observation. They have, in fact, regulated my plan of treating these affections during several years, and under frequent opportunities for verifying them; and it is, therefore, under a conviction of their truth, and of their practical importance, that I now submit them to the liberal judgment of the public.

In directing the treatment suited for this disorder, and in selecting the cases illustrative of it, it will be seen that I have confined myself exclusively to it and its varieties, having reserved for future inquiry, which will form, it is probable, the subject of a future publication, those examples of disease which owe their existence to bilious derangement, but which become, in the course of their progress, independent of it.

To those acquainted with the writings of Mr. Abernethy, it will be unnecessary for me to acknowledge, how greatly I am indebted to him for several of the conclusions which I have been led to form, or how closely, in

many cases, I have followed up his views. For the manner in which I have drawn up these papers, I feel many apologies to be due ; but I trust it will be remembered, that hospital and other public duties, whilst they give to the physician the opportunities for collecting facts, and making observations, take from him at the same time, and in the same degree, the necessary leisure for recording and arranging them.

PRACTICAL OBSERVATIONS

ON

MARASMUS, &c.

THE complaint about to be described, is one of very common occurrence. It goes under various names, according as certain symptoms of it predominate, or in conformity with preconceived and hypothetical notions of its origin and nature.* When occurring in children, the term Marasmus has been adopted by some for its designation, from the wasting uniformly attending it; and it appears, independent of the authority by which its employment comes recommended, to be as appropriate for it as any other perhaps that could be chosen, for it excludes the admission of all hypothesis,

* Febris hectica infantum, Sydenham—La Fievre lente des Enfans, Licutand—Infantile remittent fever, But-ter—Chronic weakness, Withers—The worm fever of some writers, &c.

at the same time that it implies, very properly, the absence of organic disease, and is, therefore, in reference to this fact, sufficiently distinctive of every form of the complaint.

It has, however, I believe, been hitherto regarded as peculiar to children and infants, though, if the views which I have taken of it be correct, there is no essential difference between the marasmus of children, and that disorder of adults which may be strictly denominated bilious, either in the nature, or in the causes, or in the means of cure. It varies somewhat, indeed, in its appearances, and in the intensity of its symptoms, as well as in the modes of its termination, but these variations are slight and may justly be considered as only modifications of the same complaint, originating from the influence of constitutional causes, and more particularly from the difference in the susceptibility of the system, and of particular parts of the system, to be acted on variously at the different periods of life.

Viewing, therefore, the marasmus of children to be the same complaint as the bilious disorder, strictly so called, of adults, I shall adopt these names as synonymous and convertible terms, and as comprehending under them, every form and variety of the complaint. In giving a description of the disorder, it will be

convenient to present separate views of it, as it appears in infancy, childhood, and adult age; and I shall make use, therefore, of this arrangement, limiting the period of infancy to the second, and that of childhood to the fourteenth or fifteenth year.

There are two stages into which the complaint may be divided, but which, however, are liable to be overlooked, by their running so often rapidly into each other, or by inattention to its first, and sometimes, its seemingly unimportant stage. The characteristic symptoms of each are tolerably well defined, the chronic form of it being distinguished by a morbidly craving appetite, unaccompanied by much thirst or fever, whilst the acute one is attended by a considerable loss, or by an absolute extinction of the appetite, with a considerable degree of both thirst and fever.

A young infant, when first affected with this complaint, exhibits a languid appearance, sleeping more than is usual during the day, and passing the night with a proportionable degree of restlessness. It takes with more than usual readiness its food, which appears to have the temporary effect of soothing it. After a longer or shorter time, according generally to the age of the infant, the restlessness and crying increase, a loathing of the food succeeds the for-

mer morbid appetite ; the breathing towards evening becomes quicker and louder than usual, attended with some stupor, and frequent startings, and considerable heat about the body, the feet and hands being cold. If the little patient be not quickly relieved from this state, a low degree of convulsion appears, which nurses term inward fits, and in which the countenance becomes sunken and of a dark hue, especially about the mouth ; these symptoms terminating at length in the strong and more fatal convulsion.

If the infant be a few months old when attacked, or of a vigorous constitution, its bowels will sometimes become spontaneously loose, immediately after the complaint appears, and under these circumstances, its craving appetite may continue, with occasional interruptions, for many weeks, without any considerable aggravation of the complaint, the alvine discharges varying almost daily in their appearance, but never appearing natural, being sometimes of a yellowish green and curdy, or parti-coloured, or, as nurses term it, of all colours, and slimy, and at other times, of a yeasty colour, and in this case, often of a peculiarly offensive and unnatural odour. The flesh acquires a flabby or loose feel, and wastes more or less quickly in proportion to the ur-

gency of the symptoms. The tongue is white, and not unfrequently apthous. A troublesome spasmodic cough, coming on in the evening, and recurring at intervals during the night, is not an uncommon symptom, attended by difficulty in the breathing, especially during sleep, from an apparent, and sometimes from an actual accumulation of phlegm in the throat, giving rise to that state which nurses term being stuffed. Eruptions occasionally break out about the nose, or mouth and ears, and sometimes a rash appears about the body, and in this latter case, often with a temporary relief to some urgent symptom.

After some time, the spontaneous looseness, which had hitherto carried off a portion of the imperfectly digested and irritating matters from the bowels, and thus in some degree averted the danger of considerable febrile reaction, becomes less available, for though, perhaps, in appearance more considerable than before, yet it is more unnatural in its colour, and less productive, there being much straining with scarcely any thing but slime, or watery stools, discharged. The craving appetite now yields to the opposite state, a considerable increase of fever ensues with only slight morning remissions, attended by restlessness, with intervals of stupor, that terminate in

convulsions. The fever, after some time, is often unexpectedly relieved by a return of the spontaneous and more productive looseness, which carrying off the irritating matters from the bowels, relieves the system, and sometimes restores the morbidly craving appetite. The relief thus afforded is, however, only of a partial kind, for the wasting of the flesh and strength proceeds, notwithstanding the renewal of the appetite; the infant dying at length in a state of extreme emaciation and weakness, discharging the food from its stomach and bowels, during the last few days of its life, in a most offensive and putrid state.

The complaint, as it appears in children until the age of three or four, will often resemble in its symptoms, and in the rapidity of its course, the form which it assumes at the earlier periods. As we advance, however, beyond this latter age, there is some variation observable, the chronic form of it running less readily into the acute state, from the diminished tendency to febrile and convulsive action, which is manifested by children as they advance in age.

The chronic stage of this disorder in children, commonly makes its approach insidiously, little more being remarked at first than a craving appetite for food, which is easily mistaken

for a fuller indication of health. In a short time, the countenance begins to lose something of its natural animation and blooming look, and the child is reluctant to rise at his usual hour in the morning, and when he has risen, is importunate to be nursed, or is desirous of sitting still near the fire, abandoning those active amusements in which he before delighted. He complains of being chilly and tired, and of having an aching pain principally in the knees and lower part of the thighs, and which is worst when first sitting down after walking. He is dull, fretful, and readily weeps from causes that he would formerly have disregarded. The breath is foetid, and there is commonly an itching about the nose, and an increased mucous discharge from it, along with a slight pain or dizziness in the head, and sometimes an uneasiness in the stomach or bowels. As the afternoon approaches, the child appears more languid, and is desirous of going to bed early. He falls asleep readily, and sleeps more soundly through the night than usual. The tongue is white before the breakfast is taken, and the bowels are either regular or loose, the discharge being scanty, and rather unnatural in its appearance.

As the disorder advances, there is a disposition in the patient to faint, and he is inclin-

ed to sleep during the afternoon, becoming watchful for the first few hours of the night. When asleep, he often perspires about the head and neck, and moans or talks, or grinds his teeth, and sometimes starts, awaking suddenly from fear inspired by his dreams. A tickling spasmodic cough, coming on in the evening, and recurring at intervals through the night, is a very common symptom. When violent, it gives rise to retching, and some phlegm is brough up into the throat from the stomach, which often excites a suspicion in the attendants of an incipient pertussis or consumption. The breathing, during sleep, is hurried and louder than usual, and the pulse is full and preternaturally quick. The tongue is white, and the bowels alternately loose and costive; the craving appetite generally failing as the looseness abates. The motions are scanty, and altogether unnatural, being dark and slimy, and often of different shades of green, and sometimes of a light colour. The appearance of the water is various, and its indications uncertain; the skin is harsh and dry. Through the whole progress of the disorder, the flesh and strength waste, whilst the body frequently becomes swelled. During some time, the appetite continues to be craving, for, however plentiful has been the

meal, the desire to eat again is soon renewed. The patient at length begins to throw up his food, and as the complaint advances, he becomes difficult in the choice of it, and though frequently asking for it, yet eating but little, the appetite being only good when a choice or novel kind is offered, and a preference is often shewn for that which is dry, as bread that has been some days baked, pie crust, &c.

Should any of the remote causes of the disorder be even now slightly applied, such as cold or improper diet, &c. the acute stage becomes immediately formed. Nausea is now felt when an attempt is made to eat. There is much thirst, with considerable quickness of pulse, and a high degree of fever during the afternoon and night, with only slight and imperfect morning remissions. The restlessness until some hours after midnight, is often excessive; the breathing during sleep, is hurried and louder than natural, and the skin hot, particularly about the head and body. The child screams, and sometimes raves in its sleep, and awakes in such distress and fear, as to be with difficulty pacified. There is often considerable pain in the head, or stomach, or bowels, which is increased during the night. The tongue is covered with a white

fur at its middle and posterior part, and the tongue itself appears redder than usual, the inflamed and tumid papillæ projecting through the white fur : during the night it is dry. The urine is scanty, and high coloured, and turbid, and often discharged with pain. The bowels are commonly costive, and are moved with difficulty ; their contents are dark and sometimes slimy, yeasty in colour and consistence, and of a sour and highly offensive and unnatural smell : the complexion is sallow and the whole countenance appears languid and sunken, and somewhat fatuous.

The complaint, when it attacks the adult in the chronic form, generally comes on in the same gradual manner, and with nearly the same symptoms as in the child. The craving appetite is among the earliest observed. The patient complains that the food appears to do him no good, having an empty and sinking feeling at the stomach, which is only temporarily relieved by eating, for he feels shortly after a meal as if he had long fasted, and is again desirous of taking food. He is listless and drowsy, and chilly, during the day ; complains of an aching in the knees and ankles, and of slight vertigo and dimness of sight, and feels an inaptitude for mental exertion, and dejected from no assignable

cause, becoming fatigued, and readily perspiring, from even moderate exercise. In the early stage, the sleep is often unusually sound, but at the same time unrefreshing.

As the complaint advances, there is considerable restlessness for a few hours during the early part of the night, and the sleep is often broken by frightful dreams, from which the person may fully awake, yet feel a difficulty for some little time in satisfying himself of the unreal nature of the danger with which the vision threatened him. His complexion acquires a decidedly sallow hue, which is particularly seen in the forehead and back part of the hands, and the eye loses a portion of its accustomed animation. There is constantly a loss of strength, and generally, though not invariably, a wasting of the flesh from the commencement of the complaint. The bowels are sometimes declared to be regular, though more generally they are admitted to be costive. Their contents are various in their appearance, but always unnatural, being frequently of a black green and slimy, and often parti-coloured, and sometimes of a drab colour and more or less offensive. The urine is commonly turbid and high coloured, but it is sometimes clear without being accompanied with any distinguishable variation in other

symptoms. The tongue differs much in its appearance in different individuals, under apparently the same circumstances, and in the same individual at different periods of the complaint. It is generally dry and likewise furred of a morning, especially at its posterior part, becoming sometimes nearly clean after breakfast. The pulse undergoes scarcely any sensible alteration, excepting in irritable habits, when it is quicker than natural.

There is seldom much thirst, but there is commonly a little heat about the head and breast in the early part of the night, with a ready disposition to perspire profusely, at the same time that the feet are cold. On first rising of a morning, the patient is ready to persuade himself that he is well, and generally begins, as he terms it, to fall off towards eleven or twelve o'clock, becoming more indisposed as the evening approaches. The cough, which is met with so commonly in infancy and youth, in both forms of the complaint, is of less frequent occurrence in those of the middle and advanced age, excepting in the acute stage.

The duration of the chronic stage varies considerably. I have known it continue several months, and even years, with only an occasional abatement or aggravation of its symptoms, and at length suddenly pass into the acute state.

When the acute stage is fully formed, the appetite is commonly extinguished, the very sight and smell of meat having a sickening effect. The patient, indeed, has a great repugnance to every sort of sustenance, especially to the kind that he has been accustomed and even partial to, and finds a very particular dislike to bread, and to his hitherto, perhaps, favourite beverage, tea. There is constantly, either an oppressive feeling, or an acute pain in the region of the stomach, or in one of the sides, generally the left, or in the bowels, striking to the back, which is worse towards night; where the pain is very severe, it is commonly aggravated by the recumbent posture. The patient is greatly disturbed in his sleep, awaking sometimes in considerable and unde finable terror, and rising hastily from his bed, under the impression that he cannot continue to breath in it. The restlessness during the night, is commonly indeed excessive; and even in those cases where the pain and fever are inconsiderable, there is often such a degree of watchfulness, and so great a dislike to lying down in bed, as not only to preclude the power, but even the desire, to sleep. There is always some heat of skin, with thirst towards evening, and during the night, and an increase generally in

the quickness, although but little in the force, of the pulse. The tongue is furred, and during the night it is dry. The water is scanty and turbid, and high coloured, resembling frequently the highest coloured porter, particularly in those cases where the pain in the region of the stomach is greatest. The bowels are costive, though they are sometimes believed by the patient to be regular; occasionally they are loose. Their contents are frequently of the colour of light yeast, or they are dark and even perfectly black, resembling tar in colour and consistence, and of an exceedingly offensive, and often putrid smell.

In the foregoing account of the symptoms of this complaint, there are included all those which are usually met with in it. It is not, however, to be understood, that they are all present in every case, though a very considerable proportion of them will be found to be so. Sometimes, as we shall now proceed to notice, one or more of the symptoms so predominate over the rest, as to impart to the disorder a striking resemblance to some important disease; and at other times, we meet with it under appearance so disguised, as to give to it something of the character of an anomalous and undefinable affection; for

here are few disorders, perhaps, in the whole range of nosology, which present greater variety of morbid, and what to many must seem anomalous, appearances, than is afforded by this, nor concerning which there is at times more difficulty in forming an accurate diagnosis. In infancy, it is frequently confounded with the irritation proceeding from difficult dentition, or from the presence of worms in the intestinal canal. Sometimes, it resembles the *tabes mesenterica* so closely, as to require the most minute inquiries to be made respecting its history and progress, whilst on other occasions I have seen it assume many of the generally supposed diagnostic symptoms of *hydrocephalus internus*. In its ordinary and chronic form, it is severally confounded with dyspepsia, and with the mild hysteria of women, and hypochondriasis of men; and whilst it passes under the name of chlorosis in the youth of one sex, it is frequently denominated a chronic weakness in the other. The more important diseases, however, with which it is perhaps most liable to be confounded, and from which it is of most importance to distinguish it, are the anasarca of debility, phthisis pulmonalis, and the organic and inflammatory affections of the

liver ; to all of which it occasionally bears a striking resemblance.

The swelled, inflamed and irritable state of the gums of infants, which is attributed to some natural difficulty in dentition, may be considered generally as a symptom only, and not as it is commonly thought, a cause, of this complaint ; for it has frequently occurred to me to observe, that symptoms, supposed to arise from teething, have yielded readily to the remedies adapted for this complaint ; the inflamed and tumid appearance of the gums, at the same time, subsiding without any visible advancement of the process of dentition. On these occasions, it appears, that the vessels subservient to dentition, are sympathetically excited, whereby the growth of the teeth is accelerated, or otherwise deranged, and a sensibility induced in parts, which in their healthy state, are free from it.

And that the connexion betwixt difficult teething, and disordered states of the digestive organs, admits of this explanation, will appear the more probable, if we reflect upon the numerous instances, which are daily presented to us, of apthæ and other inflammatory affections of the mouth, originating from such disorders ; and that as dentition is most painful and most dangerous, to those infants

which are reared without the breast, so as I have had frequent opportunities of knowing, it is a simple and easy process to those, who, for the first six or eight months of their lives, are exclusively confined to it. The ease, in fact, with which the teeth are cut, depends upon the healthy state of the digestive organs of the infant; and hence the prevalency of that popular notion among the peasantry of Scotland, that frequent exercise in the air will insure their infants from all suffering in dentition.

That the pain and irritation of the parts surrounding the teeth, rendered morbidly sensible by inflammation, will be capable of aggravating the complaint that induced it, and be, even of itself, sufficient to excite convulsive and febrile action, must certainly be admitted, as well as the propriety of relieving the inflamed and distended parts about the teeth by lancing them; but the disorders, aggravated or induced by this state of the gums, and the relief afforded by the lancet, no more prove its idiopathic nature, than can the irritation excited by apthæ in the mouth, or the relief procured in that disease from topical applications, be allowed to invalidate the facts, which establish the nature of their origin. Nor is the view here entertained,

respecting the relation which marasmus bears to difficult dentition, of little practical importance ; for if, instead of being regarded as the cause, it be viewed as an effect of that complaint, it will necessarily be treated as such, and those important means, medicinal and dietetic, for its removal or prevention, be consequently neglected.

Nearly similar observations are applicable to the generally supposed connexion of worms with the fever, and other symptoms of this complaint ; for, after several years' attention directed to this subject, I am satisfied of the justness of the opinion entertained by many, that the round long worm (the only kind that is considered capable of exciting this disorder in children) is never a direct cause of fever, for I have repeatedly known them to be passed without any accompanying indisposition, and have, comparatively speaking, but rarely met with them in this disorder ; and seldom indeed, in the instances where they were met with, have I had reason to conclude, that their removal had promoted the recovery.

Sometimes a very considerable and permanent swelling of the body, is met with as a prominent symptom, in some cases, of the marasmus in children, and then the complaint assumes much of the appearance of the tabes

mesenterica. There is in these cases, very often, the craving appetite, and, at other times the contrary state, and the bowels are not unfrequently thought by the attendants to be regular: they have sometimes the appearance of being too loose. The swelling is generally accompanied by the other symptoms. I have seen it sometimes, however, so free from them, as to lead me to regard and treat it as merely the effect of the disorder, that had existed and been removed. The large fœcal accumulations, which, along with the wind, give rise to the swelling, having but an inconsiderable effect upon the system, and requiring only larger and more active, and more frequently repeated doses of purgative for their removal, than are usually required in cases of common constipation. And in such cases, a variation of the purgative means is frequently more successful for this purpose, than a long adherence to the use of any particular one; and even chalybeates, as the solution of the sulphate of iron, or the simple carbonate, will often prove useful alone, by apparently strengthening, and thus keeping up, the action of the bowels. But in general, the other symptoms proper to marasmus, are present, and in such cases the diagnosis is often difficult; for, though a con-

siderable swelling of the body is not by any means a constant symptom in mesenteric affections, yet being more so in them than in marasmus, and many of the symptoms of both being alike, an attention somewhat minute to the previous history of the complaint, is necessary to enable the physician to distinguish them.

In the mesenteric affection, I believe it will be found, that the abdomen is harder and less elastic, and uneasiness is excited by the pressure of the hand upon it. The pains in it are likewise more lancinating, and strike from and to the back, and are commonly increased by a perfectly erect posture, and by any sudden agitation of the body, as that from jumping, or accidentally slipping off a step, though only a few inches high. The appetite is less craving also, and the stools are more abundant and more unnatural, preserving much of the appearance of the ingesta; and where there is a diarrhœa, this symptom will be aggravated by purgatives, if repeated, whilst it is relieved by them in marasmus. The tongue in mesenteric affections, is generally clean and florid, and the tunica adnata of the eye has much of that pearly whiteness so characteristic of scrophulous atrophy. The evening exacerbations are free likewise from that

drowsiness and torpor, which distinguish those of the other complaint, and there is not in the latter that preternaturally strong wiry feel of the pulse, which is often present in the former, and which is so remarkably the case in the scrophulous affections of important organs.

When the chronic form of marasmus attacks young women, at the period of life of an expected change, it commonly prevents it, and the complaint then passes under the name of chlorosis. In others, it generally, either renders the menstruation irregular or excessive, obstructs it through several periods, giving rise, at the same time, to leucorhea.

In a few instances, the pain of the back proper to this complaint, is excessive, and extends sometimes apparently to the uterus, and also to the hip and groin, the least false step or hurried action, occasioning very considerable pain in those parts. Some years since, I had, under my care, two very strongly marked instances of this singular modification of the complaint. The first that I saw, was from the neighbourhood of Ipswich, and had been of several years standing, and been treated with a great variety of means, without relief. I did not suspect, at first, that the uterine affection was a symptom of this

complaint, and was agreeably surprised to find it yield with those other symptoms, for which I more particularly prescribed. In the other case, of some months standing, and which likewise occurred in a married lady from a distant county, there were very considerable emaciation, and loss of appetite and strength, and so much pain and other symptoms indicative of uterine derangement, as to excite a suspicion in the minds of herself and friends, of the existence of some organic disease. Having ascertained, from account of an examination transmitted me by an eminent surgeon, that no disease existed, I was satisfied at once concerning the real nature of the complaint, and, by treating it according to the mode hereafter to be noticed, every symptom of disorder disappeared, the lady having enjoyed ever since an uninterrupted state of good health.

It has been noticed, in the enumeration of the symptoms of marasmus, that dispiritedness is commonly present in it. It may here be observed, that sometimes this symptom acquires a sort of pre-eminence in the complaint, which gives to it, improperly, the appearance of an hysterical or hypochondriacal affection. These disorders, however, differ from that under consideration, by their be-

coming better towards evening, whilst every form of the other is worse at that period. The full and free evacuations from the bowels, likewise, which are so useful in the marasmus, are decidedly injurious in hypochondriasis; and, according to my observation, only admissible in that form of hysteria, noticed by Sydenham, which is met with in women of a firm and vigorous habit, and in whom there is the tendency to strongly convulsive action. When, however, a bilious affection is thus accompanied in a female by depression of mind, there is always some danger of regarding it as a purely nervous complaint. This error, from the imitative nature of hysterical affections, can often be only corrected by examining the appearances of the tongue, and the fœcal discharges. The former, in pure hysteria, is clean, and the latter, though sometimes green, are in other respects natural. Much assistance will be also derived by an attention to the history of the case, for the symptoms of marasmus are comparatively few and definable, and will often vary but little in the same individual for several weeks; whilst those of hysteria and hypochondriasis, vary almost every hour, and exhibit the semblance of diseases that differ so widely from each other, in their nature and causes, as to

preclude the possibility of their co-existence, in the same individual. The depression of mind, observed in bilious affections, proceeds, it may be also remarked, from no assignable cause, and the mind itself is rarely occupied with an object; whilst in those disorders, it is commonly in full activity, imagining every new feeling to be the prelude or the symptom of some fatal disease.

An acute form of the bilious affection is occasionally met with, in which the derangement about the liver is so considerable, as to occasion a strong resemblance to an active inflammation of that organ. It comes on, most commonly, after fatigue, joined with cold and wet, and particularly where they have been endured under an anxiety of mind, and with much interruption to the natural rest. In these cases, the spirits and powers of the patient appear to be broken, and he often makes but little complaint. His countenance exhibits, however, anxiety, and where the disorder has existed some time, pressure made in the region of the liver, will now and then produce an oppressive feeling there, compelling the patient to a forcible and sudden expiration of the breath. The complexion is sallow, and the water remarkably high coloured, turbid and scanty; the stools are

generally of a clay colour, and the feet and legs are œdematous, with sometimes more or less of that state in other parts of the body. Large boils occasionally appear in different parts of the body, and at other times, the true carbuncle is met with, as a direct effect of this complaint. The tongue is foul, the pulse very compressible, and the appetite is extinguished, whilst the thirst is considerable, and the restlessness during the night commonly excessive. The sense of weight, and sometimes the pain at the pit of the stomach, with the thirst and other symptoms, give to this disorder much of the appearance of inflammation ; whilst often the state of exhaustion, in which the patient seems to be, and in which, as denoted by the pulse, he actually is, militates against such an opinion. In the acute inflammation of the liver, there are not that excessive watchfulness and prostration of the spirits, and almost entire interruption in the secretory function of that organ, nor that absolute derangement of the health, and tendency to general anasarca, which are so distinguishable in this complaint. If any feeling be excited in this disorder in the region of the liver, upon taking an inspiration, it is rather of weight than pain ; and where there is a cough, the same remark applies to it. I

may add, likewise, that blistering affords but little, and venæsection usually no relief in this complaint, and the blood drawn exhibits no buffiness, but commonly a slight green hue.

On some occasions, the seat of the disorder appears to reside in the bowels, giving to the complaint many of the characters of peritoneal or enteritic inflammation. In these cases, the body will be painful when pressed, and considerably swelled, and, it is chiefly by these circumstances, that it differs from that form of the complaint just noticed, in which an inflammatory affection of the liver is suspected to be present. The motions are commonly of a clay colour and frothy, being frequently voided in a putrifying and fermenting state. The distention and pain of the body are sometimes very great, and from these being constantly present, by which it is distinguished from common colic, and from the high degree of febrile excitement and nervous irritability of the patient, the diagnosis becomes, in many cases, exceedingly difficult. A few years since, I was requested by a gentleman, residing at some distance, to visit his wife, who had been ill for a short time, as he informed me, of an inflammation of the bowels, which, in the opinion of the

medical gentlemen in attendance, had already terminated in mortification. As the order was absolute for my visiting her, I accordingly set off, though I could not arrive until the third day from the date of the letter. On my arrival, I found her living, but with still no hopes entertained of her recovery. From having seen, however, several cases of the kind before, where the same difficulties had occurred to myself of discriminating between this disorder and inflammation, and having likewise the advantage of reviewing, at this stage of the patient's complaint, all the circumstances belonging to it, I was enabled to decide upon its nature ; and having explained to the gentlemen who favoured me with a meeting, my opinion respecting it, they agreed in my views, and in the propriety of the plans proposed for the relief of our patient. We accordingly gave her small doses of calomel, repeated at short intervals, following them up, after some hours, with a weak solution of the sulphate of magnesia in repeated doses, until full purging was produced. Under this treatment, in the course of twelve hours, copious evacuations were procured of yeasty coloured, and frothy, and excessively offensive motions, and with such complete relief to the tension and pain of the body, and other

unfavourable symptoms, as to leave no room for anxiety about the event of the case. In the course of a few days, by persevering in this plan, our patient became convalescent and was soon restored to health.

To those practitioners, who have seen and attentively observed puerperal inflammation, the diagnosis between this disease and the complaint under consideration, may in most cases be easy ; but where the knowledge of both is derived from description alone, there will be considerable risk of confounding them. Such of my experienced professional readers, who may honour these pages with perusal, will, I doubt not, remember several instances, in the course of their practice, in puerperal cases, where this complaint assumed so much of the appearance of peritoneal inflammation, as to make them hesitate about the propriety of employing, or regret the omission of venæsection, when a brisk calomel purge has displayed to them at once the real nature of the malady, by the prompt and entire relief which its single operation has afforded. In other cases, they will have remarked, how little relief venæsection gave to the pain and general disturbance of the system, though fully perhaps employed, until free bilious evacuations from the bowels were procured ;

purging thus appearing, in such cases, what it undoubtedly is not, a more powerful means than venæsection, for subduing of puerperal inflammation.

It was stated, at the commencement of this chapter, that the marasmus, or as it has been termed, the remittent fever of children, and the bilious disorder, are the same ; and it has just been noticed, that the acute form of this disorder is not unfrequently occurring in the puerperal state, exhibiting many of the symptoms of puerperal inflammation. In a work, written some years ago, by the late Dr. Butler, on these complaints, an attempt is made, by that otherwise accurate observer, to identify this disorder of children with the inflammation of the puerperal state, considering the difference, observable in their symptoms, to arise merely from the influence which age and other circumstances might be expected to produce. That the fever, however, here contemplated, was only the bilious affection which was mistaken for it, and that, as such, was curable without venæsection, is an opinion that may be hazarded with little chance of contradiction. For, however the two complaints may resemble each other, and sometimes their resemblance is very strong, may be laid down as an incontrovertible

truth, that the true puerperal fever is in its essence inflammatory, and its most active and indispensable remedy is free and early venæsection. Other means, and especially full evacuation from the bowels, are important auxiliary agents to bleeding, but they are not to be relied on, excepting as such. Every case of puerperal fever that I have seen, has been in its advanced state, and every one appeared to me to prove fatal, from either delaying the employment, or from the neglect altogether, of venæsection. Of the marasmus, which resembles it, I have seen numerous instances in the puerperal state, and I have known some of these cases treated by bleeding, and the usual antiphlogistic means and others, remain more than a week without any medical attendance; and others, again treated by stimulants; and all the patients ultimately receiving relief, sometimes, under circumstances, which, to the attendants, seemed hopeless, by a free evacuation from the bowels. So frequently, indeed, have these facts come under my notice, that there is no point I feel more anxious to press upon the attention of the younger part of my readers than the necessity there is to guard against the mistake of identifying marasmus with the true puerperal fever, and against the se-

rious practical error, resulting from it, of believing that purging alone will be available for the cure of both. Puerperal inflammation, except where it occurs epidemically, according to my observation, is comparatively a very rare disease; whereas marasmus, occurring in the puerperal state, and which considerably resembles it, and which is commonly mistaken for it, is by no means an unfrequent one. Full and free purging, is the suitable remedy for it, though venæsection may be often safe, and even necessary, where the fever, and local and general irritation, are considerable. But in the latter, differing as it does from the former, in being essentially, and in its very nature inflammatory, copious and early bleeding is justly insisted on as of the first importance.*

The tendency of every secreting organ, when long morbidly excited, is probably to assume a certain degree of disease, though the period of its occurrence will be influenced by many circumstances, and must be necessa-

* I have not pointed out here the circumstances, by which the puerperal inflammation may be distinguished from this fever, when this last occurs in the puerperal state; preferring to recommend the reader to study the works of Dr. Armstrong and Mr. Hey, and some other authors, who have written fully and ably concerning it.

rily uncertain. With respect to the liver, in the chronic form of this complaint, I have had frequent opportunities for ascertaining, that it may continue in a disordered state for several years, assuming, during that period, many of the supposed symptoms of chronic hepatitis, and recover suddenly and permanently its healthy state, by means directed merely to effecting a change in its action. Nor can it be said, that, in such cases, there may still have existed a change in the structure of the liver, constituting organic disease; for no instance is afforded of any such healthy change taking place so early in any other organ, where the disease of structure here contemplated had been induced; and certainly not in those cases of liver disease, where unequivocal symptoms of it existed.

From causes, perhaps not easily explained, a disposition has arisen in many practitioners to refer the origin of all disorders of the digestive organs, and sometimes even consumption itself, to some specific organic disease of the liver; and a practice has grown out of these opinions of employing long and severe courses of mercury, and a debilitating regimen, for its removal. Such views, when thus reduced to practice, cannot fail to exhibit their fallacy, since they are founded on the

error of regarding the liver as diseased, when it is only impeded or disordered in its action ; and of employing means for reducing the force of the arterial action of the organ and of the system, instead of those proper for renewing and sustaining its secretory function. To those of my readers, who may have imbibed such views, I would take the liberty to recommend the instructive practice of dissection ; for from it they will soon learn for themselves to distrust such speculations. In the prosecution of their examinations, they will find but very few cases of diseased structure of the liver, compared with those which they had perhaps classed as such ; for, however the contrary opinion may be generally entertained and expressed, a disease of the liver, according to the observation which I have made from such repeated examinations, is comparatively rare. It is, for instance, seldom met with, excepting where it has existed as a prominent and marked disease. I have never seen it, therefore, in those dying of phthisis pulmonalis, except in the case of notoriously hard drinkers, in whom the breast affection was only a late, and scarcely an auxiliary, cause of death ; and I have found it as healthy in those dying at an advanced age, as in those cut off in youth, and even in

the persons where it might have been least expected to be so, whose health had been many years declining, and in whom it might be said that life was "a long disease."

Some time since, I was present at the examination of the body, after death, of an individual who had been subject, during many years, to more considerable and more frequent irregularities in the functions of the liver, than I have often witnessed, as evidenced by the appearance of the alvine discharge. The disorder had been considered by practitioners, whom the patient consulted when from home, as a confirmed liver complaint, and a short trial of means for its removal was, I understood, resorted to. The examination detected the fallacy of the view entertained; for, as it had been anticipated, not a trace of any disease was discoverable in any part of that organ. In illustration of the same general fact, of the unfrequency of disease of structure occurring from a disordered action of the liver, in its chronic stage, I might here adduce numerous instances that have fallen under my observation. A few years since, I attended an elderly lady at Cottingham, near this town, in the acute form of the disorder, with my friend Mr. Watson, a gentleman of considerable practice and experience,

in that place. Our patient had been ill in the chronic form of the complaint, with considerable symptoms of jaundice, during most of the preceding summer. I saw her a few days after the commencement of her acute attack, and such was its severity from the pain and distention about the abdomen, and general restlessness and fever, as to lead the lady's friends to apprehend, that all our attempts to relieve her would be fruitless, as they did not expect her surviving the ensuing night. By means, however, directed by us, merely to renew the healthful actions of the liver, this lady very soon recovered, and has enjoyed ever since an entire exemption from every appearance of liver disease.*

But here, it must be remarked, that though I am thus disposed to consider the instances of liver disease, consequent upon this

* "I have examined a considerable number of persons, who have died of cancer, lumbar abscesses, and other great local diseases. I knew that these patients had their digestive organs disordered in the manner that I have described, and that in many of them the secretion of the bile had been suppressed for a great length of time, and, when it was renewed, that it was very deficient in quantity, and faulty in quality: yet, on dissection, no alteration was discovered in the structure of the chylopoietic viscera, which could be decidedly pronounced to be the effect of disease."—Abernethy's Surgical Observations, page 43.

complaint, in its chronic form, to be considerably less frequent than they are commonly judged to be, and that a large proportion of the supposed cases of that disease are merely those of disordered action, yet it must be conceded, that some of those cases of that disease, whose intractable and fatal characters set the physician's art at defiance, may possibly derive the first germs of their existence from this source. Where such examples occur, it is probable they depend upon local or constitutional peculiarities, favouring the operation of the common causes, or upon some obvious and habitual excess in the use of spirits; and of them, it may be observed, that in proportion generally as their approaches are slow and insidious, so their developement is at length complete, and their nature irremediable.

The symptoms, however, of such disease, and those proper to disordered action, are often considerably alike, and it is difficult to convey, by words, a knowledge of the means by which they may be always distinguished. Much will be obtained by a careful comparison of them, and of all the circumstances about the patient, as they respect his previous habits, &c. In many cases of diseased liver, there is but little change in the appearance of the al-

vine discharges, these being often surprisingly healthy up to the period even of its fatal termination; whilst, in the case of disorder in the function of that organ, and which constitutes this complaint, they are necessarily and uniformly unnatural.

In the diseased state, the decrease in flesh and strength generally exceeds the pain and uneasiness; whilst, in the simply disordered action of the liver, the case is commonly reversed. In many cases of disease of this organ, there is no pain felt in the neighbourhood of the liver, nor any of the other symptoms that are usually noticed as present in it. This was the case with a gentleman, whom I attended during several years until his death, and in whom there was found, upon dessection more extensive disease about the liver and neighbouring parts, than I ever before witnessed; yet, at no period up to his decease, had he ever any pain in the region of the liver, or between the shoulders, or any difficulty in lying on either of his sides. The complexion of the bilious patient, is commonly sallow, whilst that of the other, is either deeply jaundiced or of a dirty yellow, or of a pallid hue, with only a tinge of that colour. In the latter, there is but little fever, and the pulse is often slow and compressible; and as the dis-

ease advances, there is an expression of the countenance that is peculiar and distinctive, and to those familiar with it, as significant of the fatal nature of the complaint, as the fullest assemblage of its proper symptoms could render it.

That tendency, however, in the liver to assume organic disease, which may be considered as comparatively rare in the chronic form of the bilious disorder, may be justly regarded as constituting a prominent feature in the severer forms of the acute one. The liver, in these cases, frequently acquires an increase in its bulk, so as to be very readily felt externally; and I have observed, that, in addition to its general enlargement, there is often a distinct circumscribed swelling in the epigastric region of great firmness, and exceedingly tender when pressed, the least pressure giving rise, in some patients, to a hurried and agitated, but involuntary, expiration of the breath. This swelling, from the position it occupies, and from its definable and rounded form, might be thought to be a schirrus tumour, fixed in some other part; but its true seat is the liver, and, generally, the left and lower part of its right lobe, which, by losing its fine edge, and being projected forward, acquires thus its apparently

circumscribed and circular shape. The patients, in whom I have met with this disease, have always had it as an effect of the acute state of the bilious disorder. The symptoms of the latter complaint, in such cases, are always severe. The fœcal discharge is of a yeasty colour; the urine excessively high coloured, turbid and scanty; and the pain in the region of the stomach, peculiarly severe during the night, and commonly increased by the recumbent posture. In all the cases I have met with, bleeding and blistering had been employed several times, and in none did there appear to have been any permanent relief afforded by these means. In several, the complaint had existed for some months; and in one, it had commenced in South America, continuing, with little abatement of its severer symptoms, until the person arrived at Hull. The complaint, in this instance, was attributed to the offensive smell which the patient and his crew were exposed to, from their cargo of raw hides, accidentally fermenting, and becoming nearly one mass of putrid jelly. The probable cause was, the constant exposure to the cold night air, to which the stench, in the interior of the ship, compelled him to submit.

This enlargement of the liver, might be

supposed to arise from the actual presence of that congestive state of the vessels of this organ, which will presently be noticed, as occurring in the bilious disorder; but I have, in one or two instances, found it continue after that state had been nearly removed, as evidenced by the renewal, in a considerable degree, of the healthy biliary secretion, and by a marked improvement in the general health. I have, therefore, been led to regard it as an actual enlargement of the liver, from the disposition of a serous or coagulable fluid into the parenchymatous substance of that viscus. At its early stage, and before the new matter acquires an organic structure, the removal of the disease is not difficult, as it does not at that period appear to partake of those characters which so fatally mark the other forms of liver disease; yielding readily to those means which promote the action of the absorbants.

The cough, sometimes met with in continued fever, not unfrequently originates from bilious irritation. This was remarkably the case with that which accompanied the epidemic fever of 1817-18. Out of nearly one hundred and fifty cases, that I saw of this fever during its continuance, full one-fourth were affected with this cough. From the

tightness and oppression about the chest, it exhibited many of the characters of pneumonic inflammation, particularly where it affected children. In some cases, the fever commenced with vomiting, in others, with purging, or with both. Where these stopped suddenly, which frequently happened, the cough often supervened, attended with considerable difficulty in the breathing and fever. The cough, however, did not always come on in this way, nor did its appearance seem to be regulated by any variation in the remote causes. It occurred equally in those whose fever was attributed to contagion, as in those where cold was reputed to have caused it; and even some had it in a relapse of the fever, who had been free from it in the first attack. The function of the liver was so remarkably affected from the very commencement, and during the whole progress of the fever, as to give to the disorder a completely bilious character. The stools were either black or clay coloured; the cough, and the other symptoms of the fever subsiding only as they recovered their natural state. A spontaneous looseness appeared in a great many of the cases, in the course of the disease; but in none did it prove salutary, excepting where it was decidedly bilious.

The symptoms of fever and the cough, were aggravated by opiates, which stopt the alvine discharge ; but the fever and frequency of the discharge, as well as the cough, and other symptoms, were all reduced, and I believe only reduced, by those free purgative means, which promoted the secretion and the descent of the bile. The symptoms, commonly called putrid, frequently shewed themselves early, the cough acquiring, at the same time, a corresponding aggravation of its force. The fever was decidedly contagious, every individual in some poor families having become, in succession, affected by it. In one room that was exceeding ill ventilated, and where a family of six persons dwelt, the disease continued three months, all of them having become ill in it in the course of that period. The fever, in many, ran a protracted course of six and seven weeks, and the cough, in many of these cases, continued even some time after the fever was apparently removed, a hectic state supervening.

At this time, I have a person under my care, who is just recovering from a cough that commenced with this fever, which, he informs me he had about eight months since ; and I have lately discharged a patient from our Infirmary, cured, whom I admitted eight

weeks before, convalescent from every symptom of his fever but the cough. This however, was now the prominent symptom, there being the hectic fever and an anasarcaous state of the legs, with several of the common symptoms of pulmonary phthisis. Many such cases have fallen under my care since the disappearance of the fever, and in all, there was the same morbid biliary secretion; and the remedy for the cough, and other symptoms attending it, have been the correction of that state, and the removal of the morbid accumulations from the bowels.

In the first case, occurring in a child, that came under my care of this complaint, I was induced, from the difficulty in the breathing and severity of the cough, to direct leeches and blisters to be applied to the breast; and general bleeding twice in the first adult case. From the observations which I made, however, upon the appearance of the blood, and particularly from the little benefit that resulted from these general and topical means, I was led to view them as unnecessary in this particular epidemic, and to confide principally in those which produced bilious evacuations from the bowels; nor had I once an occasion to regret the plan I pursued.*

* The following observations of our English Hippocra-

Of the three adult cases that terminated fatally under my care, one had been bled twice, and prescribed for by a druggist, before I saw her. The second was in a lady, who had nursed her daughter in the same disease. Her treatment and general management, had been conducted with skill, from the beginning, by the gentleman who preceded me, but the disease had exhibited an inveterate character from the first; and our patient sunk under symptoms the most decidedly putrid. The third, was admitted into the Infirmary, under my care, in the second week of the disease. He was in nearly dying circumstances when received, having been taking, during the preceding ten days, a quantity of ale and gin, which his ignorant friends had giv-

tes, Sydenham, on the cautious mode pursued by him in the treatment of fever, are of great importance, and cannot be too attentively considered: "When I had once happily fallen upon a genuine method of treating any species of fever suitably to its nature, I always proved successful (proper regard being had to the constitution, age, and other particular circumstances of the patient) till that species became extinct, and a new one arose, when I was again doubtful how to proceed; and, notwithstanding the utmost caution, could scarcely ever preserve one or two of my first patients from danger, till I had thoroughly investigated the nature of the distemper, and then I proceeded in a direct and safer way to the cure."—Sydenham, sect 1, chap. 2, § 3.

en him. His death, which took place a few days after his admission, afforded me an opportunity of ascertaining, by an examination of the body, the truth of those conjectures which I had formed concerning the condition of the liver in this disease. As I had predicted, this organ, without exhibiting any marks of inflammation, was literally gorged with very dark venous blood, which spouted forth at every incision; and the inferior surface of it was quite of a dark colour, from the large accumulation of the blood in the vessels of that part. There were no morbid appearances in any of the organs.

Among the causes, to which may be ascribed the comparatively small mortality of this epidemic among the poor, I think I may venture to range their destitute condition in the foremost place; for no instance of fever ever came under my care, where an abstemious regimen, as well with respect to the quantity as the kind of food, was ever more necessary than in this. Even during the convalescent state, nearly the same rigid prohibition of food and stimulant drink was needful; for where it was neglected, relapses were common, and sometimes the second attack was severer than the first.

But I must here observe, that my omitting

to employ venæsection in this fever, is not to be understood as conveying a tacit disapprobation of the use of the lancet in fevers in general. On the contrary, I esteem the general conviction, now prevailing, of its utility in several forms of continued fever, when employed early, as one of the late triumphs, achieved by science and observation, over prejudices long established. Nor do I wish it to be understood, that I consider the employment of the lancet to have been inadmissible in every case of this fever. When used at the very commencement, it might in some be proper; and if I had recourse to it only in one case, it was partly because I seldom saw the complaint at its commencement, when venæsection would be beneficial, but principally because I considered it unnecessary along with those curative means, which I was early induced to rely on, and which experience taught me to be fully sufficient. My dependence, chiefly, was upon those medicines, which procured biliary evacuations from the bowels, by promoting the secretion and descent of the bile; by mild diaphoretics, by a cool regimen, and by a spare diet, as well in regard to the quantity as to the quality of the diet. The amount of blood, drawn from the whole number of patients whom I

attended, did not exceed three pints, and the quantity of wine consumed by them did not double that. Of the patients that died, three were the adults already noticed, and five were children; and of these last, three were scarcely able to take any thing when I first saw them; a fourth had hydrocephalus internus, which appeared to have followed the disorder; and the fifth died suddenly, at the end of the fourth week, in a relapse of her disorder, after a few days convalescence.

In the fever just noticed it has been observed, that where a bilious diarrhœa took place, it became critical, and carried off the complaint. It now remains to be observed, that wherever a bilious diarrhœa occurs in this disorder, it is equally efficient as a cure; the renewal of the secretion of the bile, being, in fact, its natural remedy. In many cases it happens, especially at the autumnal period of the year, that this disorder is relieved, a few hours after its attack, by a sudden re-action occurring in the secretory vessels of the liver, by which a very copious secretion of bile is produced, giving rise to sickness and purging, and constituting thus the proper cholera morbus. For the symptoms, which precede the discharge of bile in these cases, are, in fact, precisely those which are

present in the acute form of the bilious disorder, and which denote impeded secretion; and hence, in their worst forms, as I have often ascertained by an examination of the motions, instead of or along with bile, there are discharges from the liver of blood, which the attendants compare to the colour of soot, and which, if not early relieved, will terminate in a fatal malaena. The symptoms of the complaint being too well known to require any description of them, and as the cholera morbus, which is little more than a symptom of the other, will be more particularly noticed, when we have to treat on the pathology of marasmus, we may defer its farther consideration until we come to that part of our subject.

A considerable number of the symptoms of the bilious affection, are produced by the operation of that law of the animal economy which we term sympathy; for, besides the general and local disturbance, which is observed to arise directly from the disordered actions of the liver, and the other chylopoetic viscera, there are several important affections produced through the sympathetic connexion subsisting between these organs and different parts of the system, whereby an irritation, present in the former, is communicated

to parts of the body with which they have no local nor apparent relation. Of these effects resulting from the agency of this law, there may be said to be several kinds.

The first we may notice, is an increased action of the serous and mucous membranes, whereby a larger secretion of their proper fluids, or a morbid change in them, is produced. The most familiar example of this, is in the tongue, whose secretions are always more or less affected by a derangement of the biliary function. The ankles are a common seat of this sympathetic irritation, being sometimes swelled from an effusion of serum, when the parts are observed to pit; and at other times they swell from the deposition of a lymphatic fluid, when they feel more firm. These swellings I have observed to arise independently of any debility, and occur as well in those who confined themselves to bed, as in those who sat up. They are, seemingly, produced by an excited action of the vessels of the parts, analogous to inflammation, being attended with some pain and stiffness, and with sometimes a sense of heat in the parts. They are most frequently met with in adult females, and occasionally constitute the leading symptoms of the complaint. I have a patient at present under my care, at our Infir-

mary, in whom there is a regular swelling of this kind, from the knee downwards, which came on in the course of a bilious fever, with which he was affected. The whole leg is firm, and even hard, and the skin tense.

Those sudden attacks of anasarca, which we sometimes meet with supervening upon other disorders, and which have been called (as I conceive erroneously) a translation of them, are probably of this kind, and arise from an increased, though modified action, of the vessels of the cellular membrane, by which the cerous fluid is poured out. The cases that I have met with of this kind, have sometimes proceeded to general anasarca; and, indeed, I have seen a few instances, where hydrothorax and ascites appeared to originate from an action of this kind taking place in the serous membranes lining the thorax and abdomen. In some cases, the swellings produced by lymphatic effusions, are partial and insulated, giving rise to an apprehension of some serious disease in the part. The following is an example of an affection of this kind in the breast.

CASE—A young woman, servant to a lady at Bridlington, applied to me, on account of an enlargement of her breast, which had been gradually becoming bigger for several

months, attended by darting pains through it, and which was now of nearly twice the dimensions of the other. On examining it, I found that the enlargement was general, and without any perceptible hardness in any part of it, or any other change in it, than its being considerably larger, and rather more firm than the other. She had been under surgical treatment for some months, and had applied leeches, and various lotions to it, without any relief. On inquiring of her concerning her health, I found that she was labouring under a considerable derangement of the biliary function, and that this disorder had preceded the affection of her breast. I therefore desired the outward applications to be discontinued, directing for her, at first, a small dose of calomel to be taken nightly, and a dilute solution of the sulphate of magnesia, the following mornings; giving her afterwards, for a short time, a slightly tonic medicine. Under this treatment, the cause was soon removed, and I had the satisfaction to learn from herself, about a month afterwards, that no appearance of disorder about the breast remained.

Of the effect of this sympathetic irritation on mucous membranes, we have an example afforded us in the itching of the nostrils, which is among the symptoms most constantly occur-

ring in bilious derangement. In many cases, this irritation occasions a copious discharge from the parts, attended with frequent sneezing; producing, in this respect, so strong a resemblance to a common cold, as to excite in patients the belief, that they really depend upon it. The frequency of their recurrence and brief continuance, and their not being attended with, or followed by, any other symptoms of cold, are distinguishing circumstances, however, which fully prove their nature.

When this irritation is directed to the membrane lining the larynx and trachæa, it gives rise to the bilious cough, which in many cases very strongly resembles some of the forms of phthisis pulmonalis. Indeed, so strong is sometimes this resemblance, that practitioners, the most familiar with them, may be ready often to confound them. For in both, there is with the cough, which is worse during the night, an expectoration of secretions, not much unlike in their sensible qualities; a fever towards evening, preceded by chilliness; perspirations about the head and breast in the night; great loss of flesh and strength; pain in the side, commonly the left, and often the moderately good appetite.

The condition of the breathing, and generally of the pulse, especially in its advanced

stage, may, however, be commonly appealed to as distinguishing characters of phthisis. The breathing in the cough of marasmus, if hurried in the evening from the accumulation of phlegm, or on the accession of fever, is generally calm and natural in a morning; and though the pulse is not invariably rapid in phthisis, excepting in that from tubercles, yet it is nearly constantly so; and it always has a preternatural degree of strength and wiry-ness in the evening, and even during the day which is seldom met with in the same degree in the other. The discharges from the bowels in phthisis, are likewise of commonly a healthy appearance; whilst, in marasmus, they are uniformly and necessarily of an unnatural colour and fætor. There is, also, in forming a diagnosis, no little assistance to be gained from observing the manner and general appearance of the patients; for, whilst the one, affected with the bilious cough, when acutely formed, is in the advanced stages of this disorder, comparatively indifferent about himself, and gives his answers apparently with reluctance, the phthisical sufferer is more or less animated at the view of a new physician, and with the hope of a new remedy; and is careful, perhaps, to note, that it is but a little troublesome cough that he merely wants re-

moving, or some little strength that he needs restoring, for him soon to obtain his health again.

Notwithstanding, however, these seemingly distinguishing circumstances in the two disorders, the bilious cough, as has been already observed, in some cases, particularly when occurring in youth, so strongly assumes the appearance of an incipient phthisis, as to require a greater degree of attention and discrimination than the younger part of my readers may readily believe to be necessary. The dyspnœa, which, in the bilious cough, ordinarily arises from a morbid excess of the mucous secretion of the larynx, is sometimes found to exist independently of that cause, from the sympathy between the lungs, and the disordered organs of digestion, inducing a modified and mild form of asthma. The debility also produced, will, in irritable habits, render the system highly excitable by slight causes, so as to occasion, in this complaint, an unnatural quickness both in the circulation and the breathing; though the difficulty in the breathing, in this case, is, strictly speaking, only apparent; for, on requesting a person, so affected, to inhale deeply, he does it without any of that obstruction in the chest, which is observable in the consumptive; and

the pulse, though quick, has not much preternatural strength.

In general, it may be observed, where the two disorders are confounded, the error consists in considering the bilious cough to be of a consumptive nature. Of mistakes of this kind, I have seen several, and some of them have been my own ; having been led to view the cough of this complaint as depending upon a disease within the chest, I have only discovered the real nature of the case by an examination myself of the stools (a measure never to be neglected, where a precise knowledge of their condition is required) followed up perhaps by a closer inquiry, concerning other circumstances about the patient. A case of this kind, some time ago, occurred to myself and another gentleman in attendance with me. It was of a young woman, about eighteen years of age, who had been ill for some months, and whom, at my first interview, I considered to be affected with the bilious cough ; informing her friends of the opinion I entertained of her complaint, and prescribing for her disorder accordingly. On the occasion of my next seeing her, which was nearly a fortnight after, and when she was confined to her bed, I was informed that the alvine discharge was not unnatural ; that

she had not been relieved by the medicines ordered for her ; and that her weakness, and other unfavourable symptoms, had increased. From these circumstances, and from finding her cough and other symptoms decidedly worse, I was led to doubt the correctness of my first opinion, and to yield to the one entertained by her friends, of her being indeed consumptive. I now saw her daily, and with the exception of a distressing pain in the head, and some equivocal appearances in the pulse, there was not a symptom about this patient, which did not exhibit very strongly marked indications of phthisis pulmonalis. A necessity for some aperient medicine, having led me, however, to make a farther inquiry concerning the condition, and subsequently to an inspection myself of the alvine discharges, I found them in a morbid and unnatural state, which renewed in me the suspicion, that her cough and other symptoms, apparently consumptive, depended upon a disordered biliary secretion ; and means were directed for the correction of this state, and for the evacuation of the bowels, omitting the use of all other medicines. Almost immediately after the commencement of this plan, the appearances of the motions became improved ; and having combined cold spong-

ing with the other means, she soon lost her cough and other unfavourable symptoms, recovered rapidly her strength, and has had no return since of her disorder.

In some cases, this difficulty of deciding concerning the true nature of the bilious cough, and its attendant symptoms, is further increased by these being accompanied with a hemorrhage from the lungs. A poor woman, of a strong habit of body, fifty-three years of age, a patient under my care at the Dispensary of this place, is now just recovering from the eighth attack of this kind, which she has had during the last three years. The blood coughed up, has sometimes amounted, in quantity, to nearly a pint in the course of two or three days. I was present, on some occasions, when it was thus discharged, and was convinced that it proceeded from the lungs. Her cough at these times, was excessive, and attended by a very copious expectoration, with fever, quick pulse and thirst, and impeded breathing, and very considerable emaciation and loss of strength. Her attacks were always preceded by, and accompanied with, the most marked derangement of the organs of digestion, and as regularly relieved by those means which procured bilious evacuation from the bowels. In the interval be-

tween two of her attacks, she had menorrhagia. She is now free from the cough, her appetite is good, the secretions from the bowels are natural, and her strength sufficiently recovered to enable her to work labourously for her living.

But the bilious cough, which is thus observed to put on the appearance of phthisis pulmonalis, and which is generally removable with its cause, has sometimes, I have been led to suspect, as fatal a result as the disease it resembles; for where a mucous membrane has been for some time, under the influence of symphathetic irritation, it takes on in some instances a purulent action, that after some time terminates in ulceration. This appears to be the case in the worst forms of ozæna, and in some affections of the mouth, and I think likewise in that fatal disease of the bronchia, noticed lately by several writers, which has been thought to be allied to phthisis pulmonalis, but which, I have some grounds for believing, may originate from an irritation in the digestive organs, and be properly a termination of the bilious cough. It consists in an ulceration of the bronchia, attended by a purulent expectoration and a hectic fever, with its concomitant symptoms. The cough is generally very severe and dis-

tressing, and the matter expectorated is of a whiter colour than that raised in phthisis from tubercles. The nature and seat of the disease are discoverable by the cough, it being hoarse and often harsh, varying, however, much in these respects according to the seat and duration, and consequently, the extent of the ulceration. The voice is not less peculiar than the cough, being hoarse and partly whispering as if injured by previous long and and vehement speaking. There is a pain felt at the seat of the disease, which is increased by coughing and speaking. The difficulty in the breathing, depends upon the presence of matter in the bronchia, and is sometimes inconsiderable, and at other times exceedingly urgent. Where the ulceration is in one only of the bronchia, there is usually much inconvenience in lying on the opposite side, from the aggravation it occasions in the cough, and in the difficulty of breathing. The recumbent posture, is often more favourable for the cough and breathing than the erect one. The pulse is quicker and harder than natural, but it has not that peculiar sharp wiry feel, which distinguishes it in phthisis from tubercles. The countenance of the patient is sallow and depressed, having none of that animation which is so char-

acteristically marked in the other form of phthisis. The debility and wasting, previous to death, are usually very great, the appetite is variable throughout the disease, and the bowels are costive in its early periods, becoming regular as the disease advances, and very frequently continuing so to its close. All the cases which I have met with, that had reached the ulcerative stage, have terminated fatally.

Since the time my attention became more particularly directed to the subject, I have observed that this disease has always been preceded by, and accompanied with bilious irritation. In two instances of it, the derangement of the digestive organs was so strongly marked, as to lead me to entertain hopes of affording relief by removing this state; but this disease, like many others, may perhaps survive its cause; and though produced by symphathetic irritation, yet become, when once established, a distinct disease, the lungs it is probable, in some instances, partaking of the ulceration. In its early symptoms, as well as in its confirmed state, it bears a strong analogy to ozæna, of which I have seen several examples, distinctly arising from a bilious cause. The ulceration in the bronchia, indeed appears to differ only from ozæ-

na in the importance of the part where it is seated. The irritation of the nose, and a disposition to rub or pick it, and the frequent sneezing, especially when passing into a cool apartment, and the occasional discharges from the nostrils, resembling a cold, are the symptoms most commonly preceding both. With respect to ozæna, where the irritation in the nostrils is great, the discharge from them becomes very considerable, especially in a morning, and forms a prominent and distressing symptom. By correcting the disordered state of the digestive organs, this symptom yields with the others that are proper to it; but if the cause be neglected, it is found often to terminate in a purulent discharge, and at length in ulceration, constituting the true ozæna. And what thus takes place, after long continued or severe irritation in the nostrils, appears to me likely to occur in the bronchia. There is, at first, no discharge from the cough; at length there is mucous, which may be succeeded by a purulent secretion, and this last by ulceration.

The increased secretion of mucous in the early states of ozæna and the bilious cough, is the result of an inflammatory action of the parts, of a chronic kind, which, from being of a specific nature, and arising sympathetically

from a specific irritation, is not relieved by topical applications, but requires the removal of its cause. When the disease has assumed the purulent or ulcerative form, it seemingly becomes independent of its cause, and though admitting of alleviation by general remedies, yet perhaps only curable by those of a topical kind.

For several years past, I have had occasion to prescribe at times for a person, in whom the bilious cough is exceedingly violent. It occurs in paroxysms, and is usually brought on by entering a cold apartment, or immediately upon rising from bed, or by talking. There is commonly much soreness felt at the lower part of the trachea, and the voice is whispering, and sometimes scarcely audible. The itching of the nostrils is considerable, and there is constantly the appearance of renewed colds, from the sneezing and copious discharges from the head. The bowels, at these times, are exceedingly sluggish, and demand active medicines, and their contents are of an unnatural appearance; the appetite is weak, the tongue remarkably foul, and the complexion sallow. Some years since, this person was affected with a complaint, in many respects, strongly resembling the one now occurring, and was

then reduced to a state of extreme weakness, from which the recovery was both difficult and unexpected.

About four years since, I had a young lady under my care, in whom this fatal disease appeared to be forming. Her cough was exceedingly severe, and attended by a copious expectoration and much soreness in the bronchia, with considerable wasting of the flesh and strength. Her voice, whilst in bed, was natural, but on leaving her room, or after speaking a sentence or two, it became hoarse and whispering. Considering that the cough and other symptoms depended upon the condition of her general health, I directed her along with other means, to use horse exercise daily, notwithstanding its being then winter, and to take lodgings at a village in the neighbourhood. This plan was followed in every particular, and happily succeeded; the cough and expectoration, with the fever and hoarseness, gradually declined as the general health improved, and she has continued ever since perfectly free from the complaint.*

* Though I have noticed only the bronchia, as being probably affected sympathetically by bilious irritation, yet there are affections likewise occurring in the trachea and larynx of the same nature, and which undoubtedly derive their origin from the same source. Whether my con-
 jec-

Among the symptoms of a symphathetic kind, most constant in marasmus, may be remarked those affecting the head. In the chronic form of the disorder, there is always more or less of pain and dizziness, and a cloudiness in the vision, with dark spots passing before the eye, and a decided failure in the powers of the mind. Where the irritation, existing in the digestive organs, is not directed to the membrane lining the trachea, occasioning the bilious cough, or to the skin, &c. producing eruptive or other diseases, it frequently affects the head, particularly of children, in the acute stage, giving rise to several of the symptoms that are esteemed characteristic of hydrocephalus internus. Indeed, so marked is the resemblance in many cases, between the symptoms of this disorder, and those proper to that fatal disease, that I have been led, on a great many occasions, to sus-

ture, respecting the cause of these be correct or not, must be left to future inquiry and experience to determine. It is deserving observation, however, that the *apthæ infantum*, which arise from an irritation in the digestive organs, are said by Lieutaud to have been discovered in these passages, and even in the lungs—*si vero laryngem subeant, et ad tracheam bronchiam et pulmones diffundatur; tussem ferocem, spirandi difficultatem. aliaque truculentioria symptomata concitant.*—*Synopsis med. pract. Lieutaud.*

pect that this fatal disease was commencing, and in two or three instances I have been induced to believe that it was actually present; and have been gratified to find, by the result, that in the latter cases at least, I had been mistaken. In two of the instances, there was blindness for several days, with an unusually slow pulse in one of them. In another, a boy of seven years of age, whose sister I had seen in that fatal disease, there were considerable pain and confusion in the head, and a permanent double vision for some days, which were removed by free bilious evacuations from the bowels. On another occasion, I attended a youth, about twelve years of age, in whom the disorder, commencing in the biliary system, produced, after some time, an affection of the head, which appeared in its turn to give rise, for several days, to a complete rigidity of most of the muscles of voluntary motion, resembling catalepsy, and attended with an excruciating pain in the course of the spine, leaving behind, on the return of health, a permanent fatuity of mind, and the most entire relaxation and paralytic debility of the muscles previously affected. It was not until after some months, that the patient became able to support himself upright when seated, and he did not recover his nat-

ural strength until the end of nearly two years.

Having been requested by a woman, on three successive occasions, to prescribe for three of her children, labouring under hydrocephalus internus, which terminated fatally in all, I desired her to watch in any future children she might have, the least approach of the disorder that carried off these, and to procure advice for them early. She has had four since, and during the last seven years these children have been repeatedly under my care in marasmus, which the poor woman considered, and I suspect justly, as the same disorder that terminated so fatally in the others.

There is, in fact, often considerable difficulty, especially in infancy, to determine where the symptoms proper to the marasmus terminate, and those belonging to hydrocephalus internus begin; and it is frequently by the result alone, that an opinion of their nature can be formed. To me indeed, I must confess, it appears probable, that many of the symptoms, reputed as proper to water in the head, may exist before the actual effusion of water into the ventricle; and that the cases of that disease, reported to have been cured, have been cases of marasmus, which

were about to terminate in that disease, having reached the line which divides the incipient and curable form of it from that, its fatal stage, where an effusion has actually taken place. For it seldom happens, that children are affected with the acute form of marasmus, without there appearing some sympathetic affections, denoting cerebral irritation. The imperfection in the powers of speech and of vision, and the sometimes sudden and paralytic feebleness of the muscles of voluntary motion, and the decided imbecility of mind, which are occasionally met with in this complaint, are plain indications of this state ; and, as they are accompanied with apparently the same general symptoms, which precede the hydrocephalus internus, it is reasonable to presume that they owe their origin to the same complaint, the boundary which divides the two disorders, lying between that moderate cerebral irritation, which gives rise to these and to some of the other symptoms of marasmus, and that intenser degree of it, by which the watery effusion is produced. When the irritation, in fact, has reached no higher state, than what is met with in marasmus, it is removable ; but when it exceeds this, and rises to that point in which a fluid is poured out into the ventricles, it becomes, I believe, irremediable.

In many cases, we find the cerebral irritation in marasmus so considerable, as to lead us to apprehend an immediate termination in effusion. Some years ago, I attended a child, in the acute form of this disorder, who had been convulsed when an infant from the irritation, as it was supposed, of difficult dentition, and whose mouth in consequence, had become, and had continued to be, in a certain degree distorted. In the course of the illness, in which I saw the child, there were several symptoms that threatened water in the head; and during the several days these symptoms continued, the distortion entirely disappeared, shewing that the contrary side of the brain had become affected, and that a temporary paralysis had been induced in the muscles, antagonists to those which were already paralyzed, and that thus the distortion had become relieved. On the patient's finally recovering, the original distortion returned.

It is no unusual circumstance for children, who are several times affected with marasmus, to have, on each of the occasions, some single symptom present, which did not appear in the other attacks of the complaint. Thus, in one instance, there may be an irruption on the skin, and in another a cough, and in a third the cerebral irritation, which

terminates in hydrocephalus internus. Some months since, I was requested to visit a child, about two years of age, whom I found labouring under the advanced and fatal stage of hydrocephalus internus. From the intelligent mother, I learnt that the little patient, about three months before, had been affected with, and had completely recovered from, precisely the same symptoms, which preceded and attended the disease I now found him in; excepting, in the former attack, there had been the irritating cough, which belongs to marasmus, whilst, in this attack, there had been no cough, and the first symptom of an alarming kind, which appeared after three weeks indisposition, was in the head.

In some cases these several symphathetic affections appear in succession, during the same illness, producing effects more or less severe, according to the importance of the parts concerned. In this way, the sudden disappearance of an irruption, from the sympathetic irritation changing its seat, appears frequently to produce an affection about the head, which may be either relieved by the return of the irruption, or by those means which remove the cause of both. A few weeks since, I was requested to visit a child, whose brother I had attended in a fatal case

of hydrocephalus internus. In this second patient, a very general rash broke out shortly after the commencement of his indisposition. After some days, I understood it disappeared, and was immediately succeeded, as I found, by general anasarca, and with considerable stupor, and imperfection of vision, and an intermitting and remarkably slow pulse, with yeasty coloured and sometimes dark stools, and such intensely high coloured urine, that half a wine glass full, which was sometimes all that passed in twenty-four hours, was sufficient to give the proper colour and smell of that secretion to more than two quarts of water. After no ordinary struggle, the patient recovered, and during his convalescence the original rash re-appeared.

It has just been observed, that there is a difficulty in determining where the symptoms of marasmus terminate, and those proper to hydrocephalus internus begin; it is not however, to be understood, that there are no symptoms which clearly attest the presence of hydrocephalus internus. Where there are sudden screamings, and the carrying of the hand to the head, with an importunate desire to have the head kept low, and pressed between the occiput and forehead, and a delirious raving in the day time disproportioned

to the fever, with the double vision or blindness, and the slow intermitting pulse, the practitioner may assure himself, with little risk of error, of the immediate approach, or the presence, of that fatal disease. From these symptoms, indeed, I never have seen a patient recover, and I conclude that they denote either the effusion of the fluid into the ventricle, or that condition of the brain, which no local or general means have hitherto been able to remove.

But it is not merely to secreting and exhaling surfaces, that this symphathetic irritation is limited; the cellular membrane is often the seat of it, and indeed it is probable that many of those abscesses, which take place in deep seated parts, and even those which are discovered in the brain, derive their origin from the same source; for there is scarcely any part of the body that seems exempt from the influence of biliary irritation, nor scarcely any of the various morbid actions, local or general, of the system, which it does not sometimes produce. I once witnessed mania from this cause, that continued unabated for three weeks, and which was immediately removed by procuring copious evacuations from the bowels, that in colour and consistence closely resembled tar. During the recovery

of this patient, large phlegmons appeared, in succession, in different parts of the body, some of which became troublesome sores. In one patient, a married lady, there was a blindness that continued upwards of thirty hours, and which, after the recovery of sight, was twice renewed, for a short time, upon eating fish.

The various and changing forms of scrofula, originate, very often, from this source; and those hepetic irruptions, occurring about the ears of children, and sometimes of adults, are generally to be traced to this cause. At their early appearance, they may be often removed, and they may at all times be relieved, by correcting the disorder of the digestive functions: and this I believe, not merely by the relief afforded to the general health (though this effect is nevertheless important) but by destroying an irritation, which sympathetically excites the local disease.

I have at present a patient, under my care at the Infirmary, who has been ill frequently during the last two years in a bilious derangement, and who, for a month previous to his applying for relief, was affected with an herpetic ulceration, which occupied a part of the cheek and the whole of the right ear. By means, applied merely to relieve the dis-

ordered state of the digestive organs, and without employing any topical remedies, the principal part of this diseased state of the skin was removed in the course of a week. Some years since, I visited a farmer at Bewick, in Holderness, who had been for some time affected with a pustular irruption, which covered a part of his face, extending downward under the chin, and over a part of the throat. The disease had commenced in the form of small and detached pustules, which, spreading and uniting with each other, presented the appearance of a mass of newly formed substance of a granular surface, and elevated nearly one third of an inch above the sound parts. There was no scabbing, but the whole was covered with a thin cuticle, having a thin sharp ichor discharging from different openings in it. The disease had been preceded by a general derangement of the function of digestion, brought on by cold and fatigue, and, at the period of my visit, this derangement, with its attendant symptoms, was very great. The nature and origin of the morbid affection of the face and throat, were, therefore, evident, and by correcting the disordered state of the biliary function, and thus removing the source of the morbid irritation, a check was immediately given to

the disease on the chin and neighbouring parts; and, by the aid of stimulant dressings of the unguentum hydrargyri nitrati, the healthy state of the skin was in a week or two restored. It is now several years since, and he has, I understood, had no return of his disorder; which, in some degree, further proves, if further proof were necessary, that the disease did not arise from any local cause, but from a morbid and distant irritation.

In reflecting upon these and the other sympathetic affections, just noticed, and upon those symptoms of biliary derangement which precede and accompany these states, it is difficult to consider them as standing to each other in any other relation than as cause and effect. And with respect to the cerebral affections, which terminate in hydrocephalus internus, there appears to be as intimate a connexion between them and biliary derangement, as there is between this latter state and some of the other symptoms that unquestionably arise from it. The cough and itching about the nostrils, the herpetic and other irruption, the anasarca and lymphatic swellings, with the phlegmonous affections, and the marked imperfection in the vision and memory, symptoms so common in biliary disorder, apparently depend upon an irritation

of the same kind, differing only in degree or in locality, from that which excites the hydrocephalus internus.

Diseases enumerated, which may be produced by bilious irritation.—Of these several sympathetic affections, there are, indeed, a great variety; but there are also a great variety of causes, acting in the system itself, which in these, as in other cases, are capable of modifying the effects of any morbid agent. As causes for the variation in the several sympathetic affections, we may, I think, look to those peculiarities which depend upon differences in age or constitution, and previous habits, as it is probable they have likewise a considerable influence in modifying the effects, or in determining the direction, of any noxious irritant; and that thus, the same cause may produce hydrocephalus internus in the scrofulous subject, and chorea in the merely nervous or irritable one; or chorea in the child, and convulsions in the infant; or the irritation may be directed to the skin, and produce herpetic or other diseases; or to the lungs, as the most susceptible part in those asthmatically or consumptively disposed; or it may act upon the mucous or serous membranes, and produce an increased secretion of them; or it may act locally, and give

rise to *tabes mesenterica*; or both locally and generally, and give rise to the various forms of *scrofula*.

It would be exceeding the scope and object of this essay, to enter upon an inquiry concerning the precise nature of the several diseases, thus produced by sympathetic irritation, since many of them become early independent of their cause; giving rise, in many cases, to morbid actions of a local or general nature, which may either perpetuate the diseases after the removal of their cause, or favour the generation of others. I shall, therefore, close this part of my subject with merely remarking, in reference to these facts, that, in treating diseases which originate from a disorder of the digestive organs, it is important to observe, that, whilst the primary symptoms proper to it are removable with their cause, that those of a secondary kind, and which result from the first, may demand in many cases a treatment essentially different from them; and that it is only by attention to these distinctions, that errors can be avoided in our notions respecting the nature, and suitable mode, of treating these diseases.

PATHOLOGICAL REMARKS.

HAVING given, in the last section, a brief view of the symptoms of marasmus, or of that derangement in the digestive function denominated bilious, I shall now proceed to make a few observations upon those facts which serve to illustrate its pathology: for facts, it is scarcely necessary to observe, are comparatively of little practical worth, until, by their rigid induction, they have established general principles, as it is only upon these, that a consistent and rational method of treatment can be founded, for the relief or removal of disease.

As preliminary to an inquiry, concerning the phenomena and causes of disordered digestion, it will be proper to take a slight view of that function in a state of health. For this purpose, I shall begin by observing, that the changes which the food undergoes, from its being first taken into the stomach, until the expulsion of its fœculent part from the body, may be said to be of three kinds, namely, digestion, chylication, and what may be termed fœculent separation.

The first part of the process of digestion, performed in the stomach, by means of the

gastric juice ; and the second, or chylication in the duodenum and small intestines ; the biliary and pancreatic fluids, mixing with the chyme immediately after its passing from the stomach, and contributing in modes, hitherto but imperfectly understood, to the separation and recombination in new proportions of its principles, the colouring and other disengaged principles of the bile and pancreatic fluid serving to separate and carry forward the feculent parts to the large intestines, where the entire process of digestion is completed.

These several processes are carried on by organs, whose actions are rendered accordant and co-operative by means of a nervous connexion subsisting between them, which has been denominated sympathy ; and it is by the agency of this sympathetic union, that the quantity of the fluids secreted, and the periods of their secretion, are adjusted. The food, when taken into the mouth, excites there, by its own stimulus, the action of the salivary glands ; and it is by the same proper and direct stimulus, that the glands, secreting the fluids of the stomach, are affected. But as the liver and pancreas lie out of the reach of direct stimulation, they must be excited into action by an indirect impulse, communicated by sympathy from the stomach.

In this case, this latter organ, in all probability, receives from the digesting or digested food, that kind of stimulus intended for, and by sympathy communicated to, these other organs subservient to chylification, by which the bile and other fluids may be provided at the proper period, and in the necessary quantity, to mix with the chyme, as it descends into the duodenum ; where the whole, thus mixed, is destined in its turn, to excite those particular actions in the course of the intestinal canal, which are required to complete the entire process of chylification, and fœculent separation and expulsion.

If any one of these functions become deranged, it is liable to throw one or more of the others into disorder, the measure, as well as the nature of this derangement, varying from variations in the degrees of the sympathetic relation of the organs to each other. Thus, the stomach may be disordered in its functions, by a cause directly applied to it, and may induce a correspondent derangement in the liver ; or it may become so, by means of the same sympathies, from a complaint commencing in this latter organ. In the former instance, where the primary derangement is in the stomach, an imperfect or morbid stimulus may be given to the liver,

from the stimulus communicated to the stomach by its own disordered secretions, or by the imperfectly digested food accumulated there; in which case, the biliary secretion will be scanty and otherwise defective, whilst in the latter case, where the disorder commences in the liver, it may be communicated by a direct sympathy to the stomach, or by the connexion which subsists between this latter organ and the alimentary canal, whereby a series of irregular actions in the chylipoetic viscera will ensue. As to what the particular deranged states of the stomach are, which give rise to disorder in the functions of the liver, or in what they differ from those, as in mere dyspepsia and some other affections of that organ, in which no such effects are produced; and whether the stomach be constantly, or only occasionally, the first in the series of organs to be affected, it is difficult fully to determine. It seems, indeed, probable, from the tough phlegm, which is early and constantly present in the stomach and bowels of those affected with marasmus, that it has a considerable influence in many cases in aggravating, if not in causing, this complaint; and this partly, perhaps, by its own morbid irritation, but chiefly by the permanent interruption given to a healthful di-

gestion by its presence, whereby that particular stimulus is prevented from being given to the stomach, which has been noticed as necessary to excite the liver, and other subordinate organs, into their full and proper action. And this notion, may be allowed to derive some support from the fact, that beneficial effects are generally found to result from an emetic exhibited at an early stage of the complaint, when much of this phlegm is always thrown off from the stomach, and from the uniform observation, that an unnatural and tough slime is always discharged from the bowels before a cure can be effected. But upon whatever hypothesis, we may found our explanation of the origin of marasmus, or of the nature of those morbid states of the stomach and bowels which lead to it, or of the precise modes of action of those remote causes, which are found to act successively in increasing or in continuing it, it appears to me indubitable, that its seat is always in the liver, and that the means directed for the relief of the deranged action of this organ, are adequate to restore the other disordered functions to a healthy state.

It has, I believe, been generally supposed, that the marasmus, as it appears in children, consists in a merely loaded and constipated

state of the bowels. This notion, however, of the nature of the disorder, appears to me irreconcilable with the phenomena exhibited by the complaint, and with the observed effects of the medicines found useful in removing it. That it does not consist in a mere constipation or torpor of the bowels, appears to me evident from the consideration, that the acute form of the complaint sometimes comes on suddenly from cold or other causes, and that sudden relapses are also common in it; that mere purging is generally inadequate to relieve the complaint, and that relief is very often afforded to it, many hours before an evacuation takes place from the bowels; that, though their appearances are always unnatural, yet the motions themselves are not always abundant in the sense to warrant the assumption of the bowels being loaded; and that it is not until the fœces have acquired their natural bilious colour, that the disorder itself is relieved. Neither can it be admitted, as some have supposed, that the disorder consists in a merely torpid or weakened state of the alimentary canal, for this condition exists in many cases without this complaint occurring, and the medicines most suitable for it, are not among the class of remedies that could relieve such a state;

for it cannot be assumed, upon any legitimate principles of reasoning, that simple purging, which removes the constipation, can be available for the removal of the debility which occasioned that state.

The following considerations, are among those which more particularly appear to warrant the conclusion, that the disorder consists in a deranged condition of the biliary secretion. The colour of the motions of a person, whose digestion is healthy, depends upon the tinge imparted to them by the bile, and which is too well known to require to be described. The other secretions poured into, or supplied by the bowels, are for the most part colourless; any change, therefore, from the natural appearance which takes place in *fœces*, must result from a change in the bile. This change can only be produced at the period of its secretion, or after its passage into the bowels, by the action of some morbid agent it meets with there. That the former mode is that to which this change is mainly to be attributed, may be inferred from the fact, that similar appearances of the motions are observed in cases where actual disease of the liver is present, and where a consequent disorder in its functions is evident; and that, as in the organic disease, so also in

the mere disorder of that organ, the variation in the symptoms, is attended by a corresponding variation in the appearances of the stools, they being sometimes of the yeasty colour, thence acquiring, perhaps, a slightly yellowish tinge, changing to a light yellow, and then to the natural colour; or they may be of the dark colour of tar, or of a black green, changing, by almost imperceptible gradations, to lighter colours, and thence, in a gradual manner, to the healthy one. Now, the first of these appearances, clearly attests a derangement in the secreting function, and, though the greenish tinge may be increased by an acid generated from the food in the *primæ viæ*, yet, it certainly does not always depend upon that cause alone, since a green, and otherwise unnaturally coloured bile, is sometimes on dissection met with in the gall bladder. In those cases, where the motions are clay coloured, there is incontestable evidence afforded of an interruption in the secretory progress; for, generally, neither the skin, nor the secretion by the kidneys, exhibit any greater signs of the absorption of bile into the system, than are manifested under other states of the alvine discharge.

But the assumption of the secretions of the bowels being colourless, may be further

shewn to be true from the fact, that, where a complete obstruction is opposed to the passage of the bile into the duodenum, the stools are never black, but are generally of a colour partaking more or less of that belonging to the food. And yet it is in these particular cases, that there is often the most disorder in the bowels, and when of course their secretions might be expected to be most deranged, and consequently the darkest. About a year ago, a gentleman of this town died, who, during eight years, was jaundiced from a permanent obstruction existing in the biliary duct. During the whole of this time, the bowels were often extensively and variously disordered, yet, at no period, as I learnt from him, and as I had often occasion to observe myself, were the discharges from the bowels black.

The question will now, therefore, occur, as to what are the nature and source of the exceedingly black stools, so frequently met with in this disorder. To which I would reply, that, from every observation that I have been enabled to make upon the appearance of the fœcal discharges, and from every consideration I have been able to give to the subject, I feel warranted in concluding, that they derive their black colour from an ad-

mixture of blood with them, and that this blood is derived from the extremities of the branches of the vena portarum.

It was stated, in the account of the symptoms of this complaint, that there are two stages, namely, an acute and a chronic one, into which it may be divided. These states, I think, may be considered as depending upon different conditions of the liver, there being a congestive state of the vena portarum and its branches in both forms of the complaint; but in the acute one, there is a higher degree of this congestive state, giving rise, in its turn, to a certain degree of venous congestion in those organs of the abdomen, whose circulation is associated with that of the liver.

The circumstances under which this organ is placed, are, it is well known, of a peculiar kind, the venous blood, returning from the chylopoetic viscera to the heart, being appointed, in its passage thither, to circulate through the secretory vessels of the liver, as the pabulum of the biliary secretion. A portion of the venous blood, thus circulating through the liver, is therefore intended to be carried off from the mass, in the form of bile, by vessels destined for this purpose. Any interruption to the due performance of their functions, will necessarily occasion an accu-

mulation of the blood in the vena portarum and its branches, and an impeded circulation will ensue, producing a congestive state of those vessels. And, that congestion will follow in those cases where the secretion is checked or interrupted, we have the justest reason from analogy to conclude. The female breast, for instance, falls readily into a state of congestion upon any interruption occurring in its function, though the congestion, in this latter case, is arterial, and the effects inflammatory ; whilst, in the instance of the liver, the congestion is necessarily venous, and the immediate effect, that of increased disorder in the secreting organ.

In all cases of disorder in the function of a secreting organ, there is, however, a provision made by nature for its final relief. The congestive and inflamed state of the female breast, if not removed by the local abstraction of blood, or other artificial means, or naturally by a renewal of the secretion, terminates in suppuration, by which the congestive state of the vessels is removed, and a healthful state of them at length restored. But purulent secretion is the result of arterial action, and cannot take place in vessels whose character and structure are venous, and which, as far as our observations go, are incapable of

taking on the proper inflammatory action. The mode, therefore, by which the venous congestion of the liver can be permanently removed, is by a renewal of the biliary secretion. Where this does not take place, and the congestion is considerable, there may be relief afforded to the organ by the escape from it, though the *pori biliarii*, of a portion of blood, which, by passing along the *ductus communis*, will descend into the duodenum.

Of the first of these forms, we have a striking instance afforded in the *cholera morbus*, which, as consisting in a copious secretion of bile, is produced by those efforts which nature usually makes, and by which she often succeeds, to free herself from disorder. The symptoms of the *cholera morbus*, which precede the discharge of bile, are precisely, and indeed identically, those which distinguish the commencement of the acute form of this complaint, and consist of an oppressive weight and sense of fulness about the region of the stomach, with much anxiety, and general restlessness and languor. As soon as the secretion is renewed, these symptoms subside. The secretion, however, is in excess, and produces more or less of disorder; for the first effect of the morbid cause having been to check the secretory functions, the re-ac-

tion which ensues occasions it to become excessive. Appearances, somewhat analogous, for instance, are observed after taking cold, in the mucous membrane which lines the nostrils, the first effect being a sense of heat and fulness about that part, which, in a few hours, is followed and alleviated by a copious secretion of mucous. The same inordinate secretion of bile, is not unfrequently occurring spontaneously even some weeks after the commencement of the bilious disorder, and always with relief to this complaint. Some time since, a man brought to our Infirmary a letter of recommendation to be admitted a patient under my care. He had been ill nearly a month, from this complaint in its acute form; but on the evening preceding his application, and after procuring his commendatory letter, he was attacked with the bilious diarrhœa, passing, as he informed me, during the night, nearly thirty motions of a pale yellow colour, and with such relief to his complaint, as scarcely to require a single prescription from me.

But in some cases, as we have just noticed, it happens, that instead of the congestive state of the liver being removed by a renewal of the biliary secretion, it is temporally relieved from that state by the escape of blood

from the branches of the vena portarum. This effect I have seen in a variety of instances in this disorder, since my attention became more particularly directed to inquire concerning the cause of fœcal discolouration, tracing the changes in the colour of the fœces, from a deep brown to black, and from this last to the complete venous hemorrhage ; this state yielding, as the cause removed, to the black, and this to the lighter shades, until the healthy colour was resumed. When the venous blood, thus discharged, passes through the bowels, it constitutes the melaena, and where there is an obstruction to its descent through the bowels from a constipated state of them, or from other causes, it regurgitates into the stomach, producing the complaint known by the name of hæmatemesis. This hemorrhage, from its being often thus thrown up from the stomach, has been commonly, but as I conceive, erroneously, considered to arise from a rupture of the vessels of that organ ; for when this discharge is idiopathic, it may, I believe, be justly referred to the liver, and be viewed and treated as the consequence of a congestive state of it.

To the intelligent author of the work on purgative medicines, Dr. Hamilton of Edin-

burgh, we are indebted for the first hints leading to juster views of this disorder, and for a plan of treatment that enables us to combat it with success; and though I cannot agree in the opinion entertained by that enlightened physician, regarding the cause and seat of this disorder, I fully subscribe to the utility of his mode of treating it, as the treatment he recommends has an important effect upon the functions of the liver, and owes, I conceive, its success to this cause. Indeed, if we reflect upon the comparative unimportant connexion, which the sanguineous system of the stomach holds with the viscera of the abdomen, and the intimate union which, in this respect, subsists between them and the liver; and if, at the same time, it be considered with what facility bile in other cases is thrown up into the stomach, we may perceive the reasonableness of the notion that this hemorrhage proceeds from the liver. There does not indeed appear, from any knowledge we possess, either of the anatomy or physiology of the stomach, sufficient grounds for concluding, that mere constipation could give rise to apparently so serious an accident as the rupture of its vessels, or an exudation of blood from them; nor is it

conceivable that the stomach, under such circumstances, could be benefitted by, or even admit of, the action of those active purgative medicines, which are so necessary and so efficient in this complaint.

But a constipated or loaded state of the bowels, which is assumed as the cause of hæmatemesis, is by no means a regular or necessary attendant upon it; and cases of long and obstinate constipation are daily falling under our observation, without giving rise to it. Neither will the supposition of either this disorder or melaena, arising from constipation, explain the well known fact, of their frequently following the stoppage of accustomed evacuations, as if vicarious of them, as in hemorrhoidal and menstrual obstructions. Whereas, if we view these hemorrhages as proceeding from the liver, and arising from a congestive state of it, we have at once explained the reason why such obstructions should produce it, and why relief is afforded by the discharge, to the oppression and uneasiness about the stomach, and to the other symptoms of disorder; and likewise, the principles upon which the purgative treatment is so useful, as well as the origin and nature of those black putrid stools, which are so frequently met with in marasmus,

and which, in colour and consistence, so closely resemble tar.*

In the accounts which are given us, of the examinations, after death, of persons who have died of idiopathic hæmatemesis, it is acknowledged by many writers, that in several cases no rupture of vessels, nor other marks indicative of the seat of the disorder being in the stomach, were discoverable in it;† and where others mention appearances, that seemed to give some warrant to such a notion; they consist chiefly of small discolourations in the mucous membrane of that organ, which may be justly regarded as the consequences of the irritation excited by the morbid bile that has

* “I have known,” observes Mr. Abernethy, in his excellent observations on this subject, “persons whose bowels were ordinarily costive, and whose general health was much deranged by disorder of the digestive organs, though they were unconscious of its existence, feel pleased that their bowels were in a comfortably lax state; yet in observing the stools, they resembled pitch in colour and appearance.” Surgical Observations, page 47.

† The late justly celebrated Dr. Heberden mentions the case of a patient who laboured occasionally, for several years, under a vomiting of blood, and in whom, upon an examination after death, no marks of ruptured vessels of the stomach or bowels could be traced—*cujus tamen ventriculus et intestina, post mortem, nullum morbi indicium ferebant, quod duo expertissimi ac sagacissimi anatomici possent detergere.* Heberden Com. p. 403.

been poured out with the blood, and which is often found so acrid in the severer forms of the cholera morbus, as to give rise to the proper dysenteric symptoms. By one writer we are told, that an habitual hæmatemesis, in one instance, was useful and even necessary, a disorder having followed, of a bilious nature, upon attempting to stop it; and that an emetic in another, which excited a vomiting of bile, was found to be useful in removing it.

Now in the first of these two cases, there was the renewed congestion of the liver from a deficient secretion of the bile, and the hemorrhage, by relieving the congestion, removed the lassitude and other symptoms of the bilious affection; and in the last, there was the renewed secretion of the bile, which, whether produced or not by the emetic, had the usual effect of removing the congestion, and in that way curing the complaint. Some years since, I was called to attend a gentleman, who, after two or three days indisposition, became suddenly seized with faintness, from which he recovered so as to be able to walk a few hundred yards to his house. In a few hours afterwards, he was seized with a slight paralytic affection of the left side, and immediately after this he began to vomit very considerable quantities of blood. After a trial

of the various means, usual on these occasions, for the space of twenty-four hours, without any abatement of the vomiting of blood, small doses of calomel, frequently repeated, were employed, and in a few hours the discharge ceased. The paralytic affection was, after some time, recovered from, and the patient has enjoyed ever since an uninterrupted state of good health.*

The following well marked case of marasmus, accompanied by the bilious cough, and which terminated in a fatal melaena, occur-

* In a valuable and practical paper by Dr. Abercrombie of Edinburgh, and published lately in the excellent Quarterly Medical Journal of that city, there is a case related of a young lady, that illustrates strongly the views which I entertain on this subject. This patient, Miss P. aged 21, had been affected with continued fever during three weeks, when the pulse came down to 84, and the tongue became clean. Shortly after this, a headach occurred, with transient delirium and considerable stupor, bordering on coma, the pulse rising to 120. "In this state she continued a fortnight, with every appearance of a head affection of the most dangerous character; repeated topical bleeding, blistering, purgatives, and large doses of calomel, being employed without relief. The calomel did not affect the mouth, and had very little effect upon the bowels. At the end of a fortnight, she was suddenly seized with a copious discharge of blood from the bowels, this continued three days, and left her extremely pale and exhausted, but free from stupor, and the headach was much relieved: in five or six days more she was well."

red some little time since in my practice. The history of the case was procured from the patient and her mother at my first visit and affords a good example of that form of the disorder, in which there is a strong resemblance to phthisis pulmonalis.

Mary Jacks, aged thirteen, admitted a patient of the Dispensary. She complained of being affected with a severe cough, that was worse during the night, attended with an expectoration of a thick, but whitish matter; of being much troubled in her breathing, and of reching occasionally when she coughed, and bringing up from the stomach a tough and sourish phlegm. Likewise, of pain in her left side, and an increase in her cough when lying on that side; of chilliness, followed by fever and thirst towards evening; and of profuse perspiration about the head and breast during the night, at the same time that her feet were cold. She had also much pain in her head and stomach and bowels. Appetite extremely bad, pulse quick, tongue foul and dry during the night; bowels alternately loose and costive, and the discharge from them exceedingly black and offensive; and her strength and flesh so reduced, as to be unable to walk without assistance. By her mother I was further informed, that her

daughter had been ill during the last six months, and that during the first three of them she had had a craving appetite, and dark and slimy stools; was drowsy and listless, complaining often of chilliness during the day; sleeping unusually sound in a night, and so reluctant to rise at the usual hour in the morning, as to weep when required to get up. That afterwards the appetite failed, whilst the fever and debility increased, the cough and unnatural appearances in the stools at the same time becoming worse; and that, about two months since, she had a fit which continued half an hour, and during which there was a blackness about her mouth and under her eyes, an appearance, she often observed afterwards in a slighter degree whenever she was worse. Had been under medical treatment, and had been taking lately twenty drops of a mixture, consisting, in equal proportions, of the tincture of digitalis and the spiritus etheris nitrosi.

Means were now directed to correct the derangement of the liver, though the extreme emaciation and weakness, to which the patient was reduced, afforded little prospect of success. During three days, she continued to part with the same black stools that she had been discharging for some time before,

and which I found, upon examination, to be excessively offensive, and of a tar-like appearance. The cough had become very much abated, but her other symptoms were unrelieved, and the general appearance of the patient continued to indicate the most immediate danger. On the fourth day there was an indistinct tinge of a dark venous blood through the fœcal mass, and on the following morning I learnt that more unequivocal signs of it had appeared in the evening; and that during the night, the motions consisted of little else but dark venous blood, which poured from her as she laid. Her pulse I found to be feeble and fluttering, and her complexion blanched to a degree of whiteness, that I never witnessed before. There was, in fact, every symptom of an approaching dissolution, and in a few hours she expired.

Having obtained permission to examine the body, my friend and colleague, Mr. Dunning, very obligingly attended with me to do it. On opening the chest, we found some old adhesions of the pleura on the right side, but not the least disease in any part of the lungs; the right auricle of the heart, and the large vessels leading to it, were empty. There was some nearly colourless fluid in the stomach, and a very small quantity of bile in the

gall bladder. In making incisions in different parts of the liver, no blood scarcely issued from it, or from the vessels leading to it; its texture and bulk were, however, perfectly natural, but it had that blanched appearance that might be expected to be seen in an organ which had been emptied of its blood and washed. The other contents of the chest and abdomen were likewise perfectly healthy.

The following case of an idiopathic melæna, which also proved fatal, occurred shortly after the last, and was preceded by the same well marked symptoms of derangement in the function of the liver.

M. C. aged seventy-five, admitted a patient of the Dispensary. At my visit, I learnt that there had been two discharges from her bowels of a very large quantity of dark blood, preceded and attended by much sickness, and an oppressive weight at the stomach. The appetite was extinguished, tongue foul, the pulse feeble but of natural frequency; had been indisposed during the preceding five months, having been weary and languid, and particularly drowsy, falling asleep at her meals, and even lying down on the floor to sleep; appetite had been gradually becoming worse, and utterly felt the desire to eat, but was unable to do so upon making the attempt; her knees

and ankles had ached considerably, her spirits had been depressed, and her memory, and vision, and hearing impaired. During the last ten days, she had had the feeling of a load at the pit of her stomach, with frequent nausea; the bowels had been kept regular by some pills. During the following six hours after my seeing her, she parted with seven more discharges, each one consisting of upwards of two pints of pure venous blood. The excessive debility, thus induced, rendered her situation utterly hopeless, and during the three days she survived, she had all the symptoms of the worst form of typhus.

Permission having been obtained for an examination of the body, my friend and colleague, Mr. Casson, obligingly attended to perform it. There were the same appearances exhibited in this as in the former case. The liver was completely emptied of its blood, as well as the right auricle and ventricle of the heart, and the large veins leading to it. The liver, and all the other organs, notwithstanding her great age, were apparently healthy. Both the liver and intestines had a blanched appearance. The latter were lined throughout with a dark coloured slimy matter, similar to what passed after the hemorrhage stopped. There was some bile in the

gall bladder of a darker colour than natural, and a few inches of the inner part of the duodenum were tinged with bile, which was probably owing to an escape of some of it from the gall bladder after death. The stomach contained some nearly colourless fluid, and exhibited, in every respect, a natural and healthy appearance.

In this and the foregoing cases, if I mistake not, there may be seen the same assemblage of symptoms which are proper to the biliary derangement, so as to warrant the conclusion, that the hemorrhage owed its origin to that disorder. For that the blood did not proceed from the stomachs of the patients whom we examined, is sufficiently apparent from the fact, that the contents, when examined, were found to be nearly colourless; and that, if it proceeded from the intestines, it must have been by a rupture of their vessels, of which there was no sign, and for which there certainly appeared no adequate cause.

From these and other considerations which have been noticed, I think the inference is, that melaena, as well as hæmatemesis, are only modifications of the cholera morbus, arising, like this, from a congestive state of the secretory vessels of the liver; and differing from it chiefly in there being an escape

of blood from the extreme branches of the vena portarum, instead of the copious secretion of bile, which constitutes the latter complaint.

RECAPITULATION.

The view which has been attempted to be taken of the pathology of marasmus, I may here briefly repeat to be

I. That this disorder consists in a deranged and imperfect action in the secretory function of the liver, and a consequent deficient and unhealthy secretion of bile, as is manifested by the alvine discharges not having that colour, which is always imparted to them by it, when it is secreted in a healthy state, and in the proper quantity.

II. That this derangement in the function of the liver, commonly arises from a disorder commencing in the stomach; for the function of digestion is performed by organs, whose actions, by means of a nervous union established among them for this purpose, are rendered accordant and co-operative; the healthful action of the liver depending upon a stimulus imparted to it by the stomach, in obedience to this law.

III. That in certain deranged states, therefore, of the stomach, the precise nature of which is unknown, there is either a morbid or

an imperfect stimulus given to the liver, by which its secretory function is impeded, and a bilious fluid produced, that is deficient in its quantity, and commonly of a morbid kind.

IV. That, as an interruption in the accustomed actions of a secreting organ occasions a congestion of its vessels, the diminished secretion of the bile gives rise to a congestive state of the vena portarum and its branches; and, in some cases, to a similar state in those organs, whose venous system is associated with that of the liver.

V. That in consequence of those efforts which nature makes to free herself from disorder, this congestive state is sometimes spontaneously removed by a copious secretion of bile, constituting the bilious diarrhœa, or the cholera morbus; and that in other cases it is temporarily relieved by an hemorrhoidal flux, or by the discharge of blood from the loaded extremities of the vena portarum; occasioning in this latter case, and when in small quantities, the black and tar-like, and often putrid and fœtid stools; and when in excess, the idiopathic hæmatemesis or melaena.

VI. That whilst this congestive state of the liver produces an assemblage of symptoms, resembling in many points the acute inflammation of that organ, it differs essentially from that

state in many important particulars. For in the acute inflammation of the liver, it is the arterial action of the organ that is excited, and the congestion (if the expression be allowable) is arterial; the secretory function of the organ, from its being carried on by a distinct class of vessels, partaking only secondarily, and partially, in its effects; whilst in the venous congestion of the liver, consequent upon an interruption in its secretory action, the arterial system of the liver is necessarily but little, if at all, affected; the congestive state in that organ being in all probability limited to the vena portarum and its branches.

VII. And lastly, that the indications for the removal of these morbid but dissimilar states, will, therefore, necessarily be different. The inflammation in the liver will demand the same treatment which is applicable to inflammation in other parts of the body, for it differs nothing from that state in them, either in its origin or nature; whereas, in the other disorder, from its having nothing in common with inflammation, it will not, as I have repeatedly found, be benefitted by venæsection, or by blistering, and the severe antiphlogistic regimen; but the principal object to be attained, will consist in a renewal of the healthy secretory action of the liver, as it is from the inter-

ruption of this, that the congestive state, with its immediate train of painful symptoms has arisen.

REMOTE CAUSES.

THE remote causes of this disorder are cold, irregularities in diet, excess in the use of spirits, the impure air of crowded or close situations, certain eruptive fevers, sedentary employments, &c. &c. These act, in some cases, as predisposing, and in others as occasional causes. We may notice them briefly in their order.

Cold.—We need not stop to consider here the hitherto unsettled question respecting the mode, by which cold acts upon the system in inducing disease; nor whether, in reference to its power in producing the complaint under consideration, its primary action be exerted on the liver or on the stomach. The modes by which, to adopt the common phraseology, it may be taken, are as various as are the morbid effects resulting from it, these being more dependant upon the state of the system, at the period of its being received, than upon the manner in which the cold is applied; though lying on damp ground, getting wet about the

feet, or drinking any cold fluid, when the body is heated and fatigued by exercise, are the circumstances which appear to favour most the production of this complaint. The autumnal season, from the predisposition induced in the system by the previous heats of summer, and from the greater variations of temperature, and probably from some unknown atmospheric influence, appears to be the season when cold received is most liable to disturb the functions of the stomach and liver. The cholera morbus, so frequent at this period of the year, originates, as it has been already observed, from precisely the same causes, and is, in fact, only a modified state of this disorder; for the symptoms which precede the biliary discharge, are the same which constitute that complaint, the copious secretion of bile being its natural and efficient remedy.

When a cold fluid is drank, the body being at the time heated and fatigued, the effects, where disorder ensues, are often rendered more severe if the fluid be of a digestible nature, as milk, &c. In these cases, the pain and sense of oppression about the stomach are sometimes so great, and are followed by so much faintness and sickness, and other symptoms of extreme disorder, as to excite a suspicion of something poisonous having been mix-

ed with the drink. Such instances have several times fallen under my notice, and, in one or two cases, there appeared to require only some one upon whom the unjust suspicion could rest, to warrant judicial proceedings. And indeed it is probable, that many of those examples of death, which have occurred after drinking a cold fluid, or even after fluids not cold, when taken under certain states of the stomach, have been of this kind ; and it is to be apprehended, that in some of these cases the criminal prosecutions, which have been instituted in consequence, have terminated by the conviction of the innocent. About two years since, being accidentally in that neighbourhood, I saw, with my friend, Mr. Clifford, an intelligent and experienced surgeon, at Patrington in Holderness, a farmer who suddenly fainted away, shortly after taking breakfast with his family, having been up a considerable part of the preceding night, and actively employed in making preparations for an important trial at York, to which he was on the point of setting off. For nearly two hours, the pulse was imperceptible at the wrist, and it was for a considerable time doubtful whether his nearly extinguished animation would be restored. An illness, of a completely bilious character, followed this attack, and it was not

until after two or three weeks, that he recovered his accustomed health.

Irregularities in Diet.—In those cases, where irregularities of diet produce the complaint, it will be found, that some of the predisposing causes, such as sedentary employments, &c. by weakening the system and the stomach, have previously laid a foundation for the complaint. Thus, it is a circumstance of daily observation, that many of the most common articles of diet, as that of bread and milk, will prove unwholesome to children, and particularly the female part of them, when living in the centre of a crowded town, and yet prove perfectly wholesome to them in the country; and even sometimes, as I shall again have occasion to notice, food that has for some time disagreed with a child, becomes suitable for it during the employment of sponging with cold water, or the use of the shower bath, the stomach along with the general system becoming thereby strengthened.

In considering, therefore, the diet which may appear improper, we must always take into account the circumstances under which it is used; for many things will be found to disagree, under certain states of the stomach and of the system, which would have proved wholesome at another time: so that that

which is suitable in health, becomes often decidedly injurious under disease ; and even the same dietic regimen, which is useful in securing the system from disorder, will prove improper when it is present.

But it must not be here understood, that there are no articles of diet which are capable of themselves, unaided by other causes, of producing biliary derangement. Rich pastry, in all its various forms, unripe fruit, and the different kinds of confectionary, are of difficult digestion with most persons, and are unfitted under all circumstances for children. In a few persons we observe indeed peculiarities of a constitutional nature, which render some of the simplest articles of food unsuitable ; but these constitute exceptions, and, generally speaking, we shall find in our refinement about the kinds of food which are injurious or otherwise, that more attention is required in a healthy person to guard against an excess in the use, than any minute discrimination in the choice of his food ; for it is more from the abuse of what is proper, than from the temperate use of that which is esteemed unwholesome, that the bilious disorder arises.

Nor ought we to overlook our neglect of simplicity in our diet ; for the various unnatural mixtures, which an artificial cookery brings

to our tables, have contributed more towards the production of this complaint, than perhaps any single article of food is capable of doing, however exceptionable it may generally be regarded.

And the remark, which applies to the effects resulting from an excess in the use of food, is especially applicable to an improper use of wine and other fermented liquors, and includes, perhaps, all that is required to be said concerning them; for, after what has been written by professional and other writers upon the subject, there are few persons guilty of such excess, who are ignorant of the consequences likely to be entailed by it, and probably still fewer, that can be deterred from such misconduct by any considerations affecting their health.

If, however, much of the food esteemed unwholesome, may be considered to be so only as its effects are aided by an excess in its use, or by the improper modes of preparing it, yet it cannot be too strongly pointed out as being the principal cause of this disorder in infancy. Indeed, it may be laid down as an incontrovertible fact, that, during the first six or eight months of an infant's life, the only suitable food for it is the milk of its mother, all artificially prepared food having the strong-

est tendency to disorder it, and producing too commonly symptoms of a biliary derangement in their most marked and fatal form.

But here I must crave the indulgence of the reader, whilst I proceed to notice the improper plans pursued in this respect in the nursery; for most of the disorders of this age, and many of those at other periods of life, derive their origin from this source; it having been justly observed, "that where mismanagement in infancy does not actually destroy the life, it often very essentially impairs the health, the foundation of a future good or bad constitution being frequently laid at this period."* I shall, therefore, now proceed to offer a few observations concerning the causes why so many mothers are thought incapable of becoming nurses, or why so simple and so natural a mode of nourishing an infant, as that by nursing, is considered by some as unsuitable for it.†

And first, with respect to the causes why mothers are unable to be nurses. These may be considered to be of three kinds, and are

* Underwood on the Diseases of Children.

† "Believe this solemn truth, almost every woman is capable of supporting her babe, and great will prove the advantages both to herself and her infant. When it is confined altogether to the breast, it gains strength every day and defies disease."—Letters to Married Women on Nursing, Letter 7th, by Hugh Smith.

either, first, factitious; or, secondly, accidental; or, thirdly, natural or original causes.

The first of these would be suspected of having but little influence in swaying a mother from so endearing a duty, were we not acquainted with the power, which fashion is capable of exercising over human affairs. That fashion alone decides some to urge the plea of feebleness of constitution, as a reason for neglecting this duty, it would be an excess of charity to deny; that all who urge it, however, are insincere in their belief of its reasonableness, it would be uncandid to affirm. With many, it is the result of their own unaided reflection, whilst the greater number are indebted to others for the suggestion. That any mother, however, should allow it to be believed, that her physical nature is so imperfect as to unfit her for a nurse, much less that she should ever make it the subject of self-gratulation, is one of those mysteries which fashion alone can resolve. Viewed as a physical defect, it is assuredly as humiliating as such defects are commonly reputed to be; for, as a wife is naturally ambitious of the honours of being a mother, so a mother, freed from the shackles of fashion, should be ambitious of the honours of being a nurse; the capability of filling both these endearing relations, con-

stituting the perfection of her physical nature. Any falling short of this, argues the existence of an imperfection, which fashion indeed may gloss over by the substitution of a milder term for its designation, or may even render prizeable by the fashionable world being subject to it; but truth remaining immutable, this fashionable and prizeable peculiarity must still bear the obnoxious name of defect. The simple truth, however, is, that very few women, becoming mothers, are incapable of becoming nurses; for in almost every instance where it is otherwise, it will be found to depend, not upon any real or original incapacity, but upon the operation of those causes which I have called accidental or contingent, and which will be found to originate from mismanagement.*

It may be affirmed, that the first and only food which an infant demands, is precisely that which nature prepares in the breasts of its mother. This is rendered evident, by the supply according with the demand, as well with respect to the quantity needed, as with regard to the time when it can be given, and when it will be required; and this is only one among the countless arrangements, which Providence

* "How much it is to be lamented," observes Professor Frank, "that a duty which nature has imposed upon all animals, and in reference to which she has provided

has ordered for our benefit. The obvious course, therefore, to be followed, for the mutual benefit of the child and mother, undoubtedly should be to fulfil the designs of such a provident arrangement, and to give no food to the infant until that which nature provides for it be prepared. This, however, is not the mode generally pursued. Only a few hours, and sometimes only a few minutes, are suffered to transpire, after it is born, before the infant is fed, the mother and attendants deceiving themselves into a belief that they are acting right, by the readiness with which their liberal and sugared supplies are taken. In the mean while, at the time appointed by nature, the preparation of its natural food commences, in the only place too where it should ever, at this early period, be prepared—in the bosom

in all a peculiar organization of the body to create a mutual bond and kindle mutual feelings of affection; how much is it to be lamented, that this duty (whether it be in consequence of some physical or moral inability) has been so often disregarded, or to speak more justly, neglected; and that either from delicacy of frame or love of ease, mothers are reluctant to make any sacrifice to the duties of nature, since by giving up to an hireling the sweet and endearing occupation of bestowing their care and caresses on their infant offspring, they vacate and trample under foot duties the most honourable, the most imposing, the most sacred!"—Treatise on the method of educating children, by J. P. Frank, Proff. of Clinical Med., at Vienna.

of its mother. The aid of the infant is now to be required to solicit and receive it; but it is objected to, perhaps, by the nurse, on the plea that it eats sufficiently, and that it will draw nothing in but wind. The necessity, however, for its aid becomes at length imperative, and now it is found that the period is past for its affording it. The child has been fed with a food, the very lightest kind of which must prove unwholesome, when so prematurely given. Its stomach has become loaded and oppressed; and instead of that active appetite, which would have rendered its sucking vigorous and efficient, it either feebly and languidly attempts it, or turns from it crying with every appearance of disgust.* As the only alternative, the distended bosom must be relieved by drawing. This is repeated from time to time, with occasional, but unsuccessful, attempts to encourage the infant to draw it. The imperfect and irregular evacuations of the

* "It is therefore certain, that considering the advantages of an early presentation of the breast to the child, the method which prescribes that the child should suck as soon as the mother has obtained some repose and taken some nourishment, is, without doubt, the best and most rational. Rosner and Van-Swieten are decided on this subject, for, say these celebrated men, we not only prevent milk-fever thereby, but obviate also the too great distention of the breasts, and a throng of other evils, although the sucking of a feeble child be then quite languid."—Treatise, &c.

breasts, at length occasions some irregularity in the circulation; a fever ensues, the general system is disordered, and the milk finally disappears, the mother and her friends satisfying themselves with the result, by concluding that the milk had been either unpalatable or unwholesome in its qualities, or insufficient in its quantity, to satisfy the infant, or that her constitution was naturally too feeble to admit of her becoming a nurse.

Of the few real or original causes which sometimes render nursing impracticable, may be mentioned the imperfect evolution of the breast head or nipple, which is commonly occasioned by improper modes of dressing, and which precludes the infant from obtaining the necessary hold of it. The principal cause, however, is disease, and that, generally, of the consumptive kind, which, being checked by the previous pregnancy, appears to acquire a new energy after parturition, utterly unfitting the mother to fulfil the duties of a nurse. In such cases, there are such unequivocal symptoms of disease, as to leave no room for questioning the propriety of avoiding every attempt at nursing.

Such cases, it must be remarked, however, differ very materially from those occasional indispositions, to which many women are sub-

ject, and which seem, and only seem, to countenance the notion of feebleness of constitution; for, whilst the sufferer under actual disease would be weakened by nursing, the simple valetudinarian, we may venture to affirm, would be benefitted and strengthened by it. For nursing, it must be observed, is not, what, viewed superficially, it may at first seem to be, a mere drain upon the system, depriving it of so much of its sustenance and vigour. Properly conducted, it is a natural and healthful function, succeeding naturally to the state of pregnancy, as the continued, though varied, means of support to the infant, and which nature bountifully sustains, by the more vigorous appetite and digestion which she imparts to the nurse.

Upon this point, however, it may be necessary to be something more explicit. There are two modes of nursing practised, which differ very essentially in their effects, both as it concerns the infant and the mother. The one is that pursued by the majority of nurses, consisting in giving the breast three or four times in the twenty-four hours to the infant, with a liberal allowance of food in the intervals. The other consists in restricting the infant, during the first six or eight months of its life, exclusively to the breast, withholding from it

every other description of food. In the latter case chiefly, perhaps only, can we look for those striking evidences of the healthfulness of the function of nursing, as manifested in the heightened appetite and vigorous digestion of the nurse, with the regular and copious secretion of milk. In the former, where the infant is fed, there is frequently, on the part of the nurse, a failure in the appetite, and in the powers of digestion, and, not unfrequently, a feverish state of the system, with a sense of general feebleness; circumstances, that are erroneously considered as affording a proof, that the powers of the constitution are unequal to the office of a nurse. That the cause, however, is to be sought elsewhere, is a fact but little considered or attended to.

Now the irregularity unavoidably occurring in the quantity of milk drawn by the infant, from the varying effects of the other improper food upon its stomach, and consequently upon its appetite and health, will necessarily occasion an imperfect evacuation of the breast at one time, and an unusual, and even something like a voracious, demand upon it at another; and consequently, at one period, the system of the nurse may be thrown into disorder, by a repulsion of the

milk giving rise to headach and loss of appetite, and the other attendants of a disordered circulation ; whilst at another, there may be a sudden and unusual call for it by the infant, which is felt to be exhausting and enfeebling, by there not having previously existed a vigorous appetite to support it. But these, it must be observed, however, are the consequences of an irregular and imperfect performance of the function, and require to be distinguished from those which result from it, when exercised under the enfeebling influence of disease. In the former case, the beneficial effects, inseparable from the proper exercise of so important a function, are lost to the system ; whilst the ill effects, equally inseparable from its misemployment, are erroneously attributed to the nursing, without any reference to the injudicious mode in which it is conducted ; thereby improperly identifying the proper and healthful effects of nursing, with those causes of debility, whose nature and origin are known.

But besides those causes, which prevent a mother from becoming a nurse, and which may properly be said to pertain to herself, there is another remaining to be considered, which is often urged as a reason for her abandoning the duty, after having for a short

time engaged in it, and which is regarded as applying in some degree to the infant, as well as to herself. This is the notion, so commonly and so unjustly entertained, of the milk disagreeing with it.

It has already been remarked, that nursing, viewed in its proper light, is to be considered no other than as a modified continuation of the union, which subsisted during pregnancy, between the mother and her infant, and that this function is only a varying of the means of support afforded by the parent to her offspring. It is scarcely necessary to repeat the remark, that the milk is a nutriment sent for the sustenance of the infant, or that its properties are admirably adapted, above all artificial combinations of food, to the wants and circumstances of the infant, containing, as chymistry has shewn, all the required materials of nutrition, without any foreign or unnecessary admixture. But if it be true, that it is liable permanently to disagree with an infant, it must in such case undergo some important change, and lose those qualities which confessedly distinguish it above the best devised preparations of food. That any such change can occur, when the nurse is in possession of health, is assuredly not to be admitted. That any ordinary indisposition

is capable of inducing it, is almost equally inadmissible. The fact is, that the function of secreting milk is found to continue with no sensible abatement of its healthiness, and but little of its activity, though exposed to the influence of agents which readily affect the other secretions of the system ; that even during jaundice, the milk retains its purity and colour unaltered, whilst almost every other secreted fluid is affected by it ; and in truth, that this important function appears to be placed out of the reach of all ordinary causes of derangement ; the final cause of which undoubtedly is, that the most helpless period of our existence should be thereby the better secured from the accidents of want and disorder.

Were it not from the fear of extending these remarks to too great a length, I might here enter into a somewhat detailed enumeration of these qualities of the milk, which more particularly recommend its use. There is one property, however, that peculiarly distinguishes the first portions of it drawn, which merits attention from the important office it serves to the infant, and from the neglect of which, the disorder under consideration is so frequently produced.

It is well known, that the bowels of a new-

ly born infant are lined with a dark coloured slimy fluid, termed meconium, which requires to be removed before the functions proper to them can be duly performed. Now, this needful office is performed by the milk, which appears to be endued with purgative properties, either partly or entirely, for this purpose ; its laxative qualities continuing merely the necessary time to cleanse the intestinal canal. One evil, therefore, attendant upon the prematurely giving of solid food, will be the introduction of new matter into the bowels before the meconium has been removed, and consequently before the bowels are in a condition to execute their functions properly. If solid food be permanently substituted for the milk, then those natural purgative means will be neglected, which nature had provided for the accomplishment of her designs, and disorder, more or less considerable, will be the consequence.*

And this leads me to remark, that the opinion commonly entertained of the infant age

* “ Infants deprived of the nourishing juices of the mother on which the healthful constitution of their bodies so much depend, fall into numerous diseases which often terminate in death. They may be compared to plants which transplanted from their native soil to a strange earth, take root slowly and feebly, fade, wither and die.--Treatise, &c.

being highly susceptible of disorder, is not strictly accordant with the fact. Where that particular management is adopted, which nature points out, the converse of the proposition is nearer the truth ; for, though the organization of a newly born infant be peculiar, and of a mixed character, yet being provided with powers suited to its state, the development of its faculties are gradually and naturally called forth by the circumstances and wants of the infant.* If these powers are impeded in their action, by a departure from that path, disorder will then ensue, and the complaint, thus induced, will assume an importance proportioned to the necessity there was for those actions continuing free. Sensible, apparently, of this truth, it is the study of those, to whom the first periods of infancy are entrusted, to secure their little charges from disorder ; but unhappily, the methods they adopt for this purpose, are too commonly injudicious, the diligence and the zeal employed, being exercised in interrupting, rather

“ * Scarcely one in four of those brought up by hand, get over the cutting of their teeth. Almost every complaint, to which children are subject, appears to me to proceed originally from an improper management of them ; for the young of all other animals are full of health and vigour.”
 Letters to Married Women on Nursing, by H. Smith, M.D.

than in watching and seconding, the efforts of nature. Most of the attempts, indeed, that are thus made, partake too much of officiousness, and exhibit a blind and too confident belief in the powers of art, and too little a reliance on the efficiency of those of nature, to carry on her own work for the conservation of health.

Thus, under the influence of these erroneous views, it is a common practice with nurses, to administer something to act as an aperient medicine to an infant, immediately after it is born, because a constipated state of the bowels would be injurious to it; and as griping, which is the consequence of indigestion, would be hurtful, ardent spirits, which will produce a fatal indigestion, are employed to prevent it.* Upon the same principles, bandaging the body of an infant is resorted to, as a means for preventing deformity, or of imparting strength; and general vigour and plumpness are to be secured by the use of cold water, at its first washing, and by early and plentiful eating. In all these cases, there is

* Few persons, indeed, not familiar with the diseases of children, can have any just conception of the extent of the practice, which now prevails amongst the lower order of monthly nurses, of giving spirits and opiates to children. A poor woman, the wife of a labourer living in the coun-

plainly discoverable an implied belief, that the ordinary processes and efforts of nature, admirable and inimitable as they are, will be unequal to the accomplishment of those ends, which the beneficent Author of our being had appointed them to produce ; and that health cannot be continued by natural means, but must be sustained and prolonged by those that are purely artificial : that the mother's arm and bosom, in fact, are inadequate supports to her infant, unaided by bandages ; and that the symmetrical beauty of the female form, can only be moulded and perfected by stays and backboards.

That these principles actuate a large proportion of mothers and nurses, and are extensively acted on, and extensively injurious, have had ample opportunities of knowing ;

My, lately informed me, that, out of ten of her children who were born healthy, nine had died under the age of three years, and most of them under two months, and that by the advice of her nurse, she had given spirits to them all before they were a week old. Another poor woman, also from the country, had twins, who were healthy until they were three months old, when, being necessitated to work daily for her subsistence, she endeavoured to procure herself rest during the night by giving them an opiate bed time. The consequence was such as might have been foreseen ; the poor infants immediately became ill from it, and, in the course of a few weeks, literally perished from its effects.

and particularly as it respects the influence which they exert, in giving rise to, or in favouring the operation of those causes which give rise to the disorder that has been just considered.

Of the injurious effects which will be produced by the application of bandages or stays to the body of a child, we may form some judgment, when it is considered, that the organs, contained within the chest, fill up completely the space allotted to them; and that the ribs, as well as the other bones of an infant's body, may be prevented, by even slight pressure, from acquiring that shape or expansion, which nature designed they should take. If the natural expansion of the ribs be restrained, the expansion of the organs, seated within them, must be restrained in a proportionable degree, and the heart and lungs, and other organs, within the range of the compressing ribs, will be checked in their progressive developement. That the curtailment of the space for their full and perfect growth may be inconsiderable, may indeed be true, but vital and important organs cannot be subjected to any limitation of their due expansion, without the most serious risk being incurred of disorder.*

* " Spiegel says that the consumption and decay to which

But if bandages be available for supporting an infant, or stays for determining and moulding the figure of a child, they must effect these purposes by pressure ; but pressure, however skilfully applied, must necessarily be unequal, and otherwise imperfect, and the effects will be therefore imperfect and unequal, so that distortion will be the consequence, and that in the ratio of the force employed by such irrational means to prevent it. The fact is, that the best support of an infant is its nurse's arms, and as its strength will be best promoted, by the healthful digestion and assimilation of its food, so the symmetry and beauty of its form, can be only evolved by the operation of those mysterious, yet unerring causes, which the

the English are so subject, is attributable to the too great contraction of the chest. It is undoubtedly true, that the free and healthy action of the lungs depends upon a proper expansion of the chest, and according as this expansion is sufficient, or insufficient, we can judge of the health and strength of the body ; at least, we observe very sad consequences result from an inadequate expansion, and the consequent hinderance to the growth of the body. Desessarz maintains that this may originate an asthmatic affection which will last through life, and that other affections also arise from compression, denoted by vomiting, because the liver, which is more voluminous in infants than in adults, compresses the stomach, straitens and disturbs it, and at length induces a spasmodic affection of it."—Treatise by J. P. Frank, &c.

interference of art may disturb, but cannot assist.*

But beside the injury, which the pressure of stays is calculated to produce in a child, by permanently repressing the due expansion of the organs, situated beneath the ribs, there is no inconsiderable effects produced by the pressure which they make upon the abdomen, whereby the full and natural expansion of the stomach, following a meal, is prevented, and the intestinal canal is compressed; the peristaltic actions of the bowels being thus impeded, and a torpid and costive state of them induced. And that such are the effects resulting from the pressure of stays, I have frequently had occasion to suspect; and though other causes undoubtedly contribute to it, yet

* “ The attachment of parents increasing as their children advance in years, they use all their endeavours to procure and preserve for them elegance of form. In order to this, they fit upon their chest a mass of whalebone tightly laced all down the spine, which cannot fail to compress and straiten the chest and abdomen. The muscles of the back and breast become, through the inaction to which they are subjected, inert, and, as it were, paralytic, so that those parts which should support the trunk and prevent an inclination forward, form a bunch on the back, and in the hope of remedying this, recourse is had to a corset of whalebone still higher: And what is the consequence? The evil increases daily in despite of all their efforts.”—Treatise, &c.

it may, I believe, be numbered among those which occasion the constipation, so general amongst females, compared with the condition of the other sex.*

Eruptive Diseases.—It is often observed, that a person becomes affected with marasmus after passing through an eruptive disease, and particularly after measles, and the disorder as frequently succeeds the mild form as it does the severe kind. I have seen it occur in some who had had that disorder so mildly, as scarcely to shew any signs of indisposition, and it has always appeared to arise from the neglect of those laxative medicines, so generally needed in eruptive fevers. Where due attention has been given to this part of the treatment of these fevers, it frequently happens, that a person, after passing through them, becomes more vigorous than he had previously been, and

* “It is well known how much these stays of whale-bone have injured form and health. The stomach and intestines, always compressed and constantly constrained in their functions, execute them all but imperfectly; digestion is destroyed, the bowels are obstructed, the humours are changed, and the persons wearing them become feeble and pale; acidity prevails, food does not nourish, the bones become soft, and the form is spoiled; the very means which were designed to produce elegance of form become, in fact, the cause of an opposite effect.”—*Essay on the diseases of people of fashion*, by M. Tissot, M. D.

which I am disposed to attribute more to those evacuations from the bowels, which nature or art had procured, than to any specific change in the constitution, which the complaint might be supposed to have produced.

The impure air of close and crowded situations—sedentary employments—late hours, &c.— Without detaining the reader by any observations on the precise modes by which these several causes act, it will be sufficient to observe, that by weakening the system, and thereby the stomach, they exercise an important influence in favouring the operation of those causes which produce the disorder. For the system when weakened, is readily affected by agents, which, in a state of vigour, it would have resisted. Thus the cold, to which the children of the poor are subjected by their inadequate clothing, would have much less injurious effects if their food were nutritive and abundant; and for the same reason, the insufficient and watery diet, with which so many of them are fed, would be rendered less hurtful in a climate more temperate and congenial than ours. On the same principle, the close and impure air of a crowded city, is rendered less injurious by a careful attention to guard against the other causes of disorder; whilst, on the other hand, the pure air of the country

is a means of imparting a degree of vigour to the system, which often renders it superior to the influence of ordinary agents. Where, however, with the predisposing causes of impure air and sedentary employment, there are joined an insufficient period for repose, and perhaps an unwholesome or imperfectly nutritious diet, the most serious derangement in the digestive functions may be expected to ensue. And this is what occurs in some of our cotton manufactories, where children are exposed to all those causes of disorder, which, acting conjointly, few constitutions can resist. By reasoning concerning the influence of each of these, abstracted from the rest, it might be readily shewn, indeed, that they can have but little power in occasioning this disorder; whereas, if they are considered as acting by their aggregate force, their pernicious effects will at once be manifest. For the fatigue which is endured with impunity by the labourer, who is adequately clothed and nourished, may become to him, under other circumstances, a source of disease; as the great art of resisting the power of one noxious agent, to which we are unavoidably exposed, is to avoid the influence of all others.

TREATMENT.

THOUGH the doctrine of a *vis medicatrix naturæ* is no longer followed in the treatment of disease, it is, nevertheless, in many cases of advantage to watch those efforts which nature makes for her relief, as we may often gather from them the most important instruction, as well with regard to the nature as the cure of diseases. In the disorder, whose treatment we are now to consider, and which consists, as I have already endeavoured to shew, in an interruption in the secretory function of the liver, and a congestive state of the *vena portarum* and its branches, we find that, where a renewal of the secretion does not take place, that a temporary, and sometimes a permanent, relief is afforded to the organ and to the system by a hemorrhage from the congestive vessels, as in *hæmatemesis* or in *melaena*, or from others which communicate with them, and participate in their congestion, as that from the hemorrhoidal veins; and that in this, as in other cases of impeded secretion, the removal of the congestion, consequent upon it, contributes to abate the force of the complaint, and sometimes to renew the healthful action of the organ. To imitate, therefore, these beneficial

efforts of nature, as far as they are imitable, and to supply what they fail to afford, must be the object of the physician in the treatment of this complaint.

The following are the general indications of cure : 1st. To correct the disordered action of the liver, and remove the congestive state of that organ : 2d. To cleanse the bowels of their morbid secretions, and the imperfectly digested matters collected there ; and 3d. To lessen or avoid all those causes which tend to aggravate the complaint.

To fulfil the two first of these indications, that class of medicines are to be employed to which we give the general name of purgative. The several medicines, however, that are thus classed together under this name, are of various powers, and differ from each other in many important particulars. Some of them having an immediate and specific action on the liver, are chiefly purgative, by promoting the secretion and descent of the bile ; whilst others act principally by the stimulus they give to the small intestines, occasioning a free secretion from their vessels ; and a third prove merely aperient, and act chiefly by stimulating the larger bowels into forcible contractions for the expulsion of their contents. It is on the two first of these that we must rely for

the renewal of the secretion of the liver, and for the removal of the congestion of it, and of its associated organs; though the third is often useful in continuing or sustaining their healthful actions, after their morbid states are removed.

Of the medicines of the purgative class, which have a specific action on the liver, the mild preparations of mercury are the chief, and of these calomel may be considered as the one, whose effects will be found most uniform and most to be relied on. The property which this medicine possesses of acting upon the liver, is generally known, and various attempts have been made to explain it. In some cases, it would appear to affect the liver by an action which it excites in the stomach, by either altering its secretions, and thus renewing a healthy action in this organ, or by a particular stimulus it imparts to it, and which is communicated by sympathy to the liver; whilst in other cases, these opinions would appear to be contradicted, by the same effects being found to result from the introduction of it into the system by the skin. Of its precise mode of action, therefore, we must be content to remain ignorant; and indeed, like that of the cinchona in the cure of intermittents, its operation, if understood,

would not perhaps be on that account the more successful.

When a patient, who labours under a derangement of the biliary function, takes a small dose of calomel at bed time, it commonly happens that, instead of the restlessness of former nights, he sleeps more calmly and soundly than usual, and awakes in the morning with a conviction that he owes his rest to an opiate. This fact I so frequently observe, as to be fully satisfied that the restlessness in this complaint, depends upon the presence of some disordered actions, which the medicine relieves. And that these actions are those of the liver, and that the final change produced is in the functions of that organ, appear from the alteration which is observed in the motions; for previously to the use of the medicine, they are perhaps black, or of the colour of yeast, and of an unnatural foetor; whilst, during its use, they gradually acquire their proper and healthy appearance.

But the power, which this medicine possesses over the secretory functions of the liver, is not confined, as it is generally thought, to increasing its activity when in a sluggish state; for it is equally efficient to reduce the secretory action when in excess, its tendency, when acting, being to restore the actions of

the liver, whether deficient or excessive, to their natural and healthy state. In those cases, where there is an impeded secretion of bile, this medicine has the power of restoring it, occasioning, in many cases, at first, a very copious discharge; and where the secretion is in excess, as in cholera morbus, its powers, in subduing the inordinate action of the liver, are still more distinguished; and where, again, the secretion is in a proper state, it appears to have little or no effect upon the liver, though given in those doses in which it before was so active. In cholera morbus, therefore, and in the common bilious diarrhœa, it is the remedy upon which I am accustomed entirely to rely; and its power in subduing the sickness, and in lessening the excessive secretion, is so considerable, as to render all other measures for these purposes unnecessary.

In administering calomel in marasmus, it is necessary to bear in mind, that the disorder consists in a derangement in the functions of the liver, and that, whatever irritation may be present from morbid accumulations in the bowels, this medicine is not usefully employed, if given as a purge, but that its proper action being on the liver, medicines of a strictly purgative kind should be selected

for their evacuation. The doses, therefore, of calomel should be small, and should precede, by some hours, the employment of the purgative, as it appears to be most serviceable, and to answer its specific purpose best, when it is allowed to continue some time in the stomach. In ordinary cases of the disorder, a dose once in twenty-four hours is sufficient: but where the symptoms are urgent, it is often necessary to give it more frequently, abstaining from the use of purgatives until after the last dose of the calomel has been taken. This will be particularly the case, in those sudden attacks of the disorder to which infants are subject, and in which the extremities becoming cold and livid, and the face sunken and discoloured, denote the approach of convulsions.

Where the bowels are constipated, and the general irritation and restlessness appear to proceed from the morbid irritation of sordes in the primæ viæ, as well as from the disordered action of the liver, it will be proper to give a larger dose than usual, following it up in two or three hours with a brisk cathartic. For the irritation produced in the bowels, by sordes collected there, is often itself a fruitful source of disease, and sometimes demands an earlier attention than the original

cause which led to it. And this is the case particularly where symptoms of hydrocephalus internus are threatening, and which appear, in many cases, to occur as much from irritation existing in the *primæ viæ*, as from the specific action of the liver. But the active purging thus induced, is not, however, to be repeated by means of calomel; but, if the same effect upon the bowels be considered needful, the ordinary purgatives may be given alone, giving the former separately, and in a smaller dose, and as long before the administering the latter as the circumstances of the case will admit of. In general it will be found, that active purging is rarely required to be repeated in the severest form of the disorder, the principal object in the treatment being to restore the healthful function of the liver, and to procure, once or twice daily, a regular and free, but not a purgative, evacuation from the bowels.

It is a very common circumstance, especially with children, for the first dose or two of calomel, given nightly, to excite sickness and vomiting shortly after being taken, whilst those that follow often produce no inconvenience. Its emetic effect in these instances, as it denotes considerable disorder of the stomach, may lead some perhaps to consider

it proper to discontinue the use of the medicine, or to order an emetic; but neither of these measures are necessary, as the stomach becomes sufficiently clear by the sickness to bear the calomel afterwards. In no case is it either necessary or proper, to allow the medicine to affect the mouth, and therefore every precaution should be taken, by the smallness of the doses and unfrequency of their repetition, and by preserving an open state of the bowels, to guard against this effect. When the natural secretion of bile is restored, it is proper to discontinue the employment of the calomel, as it often, in these cases, disagrees with the stomach, and to give the opening medicine alone.

Sometimes it is found, after employing the calomel some time, and restoring the patient to a state approaching to convalescence, that the symptoms of biliary disorder become stationary, or even return, as evidenced by the unnatural appearance of the motions. In these cases, mercurial friction, employed nightly on the right side, for a short time, will answer a more valuable purpose than a perseverance in the use of the calomel; though the same precautions must be attended to here in guarding the system from its effects. To ascertain the changes which are

produced upon the functions of the liver, it will be necessary to inspect personally every evacuation that is passed; or, where this is not practicable, the patient or the friends should be required to make a daily report of their appearance, as it is by these means chiefly that an accurate knowledge of the progress of the recovery can be obtained, and a rule be afforded for the government of our practice, with respect to the continuance of the calomel; for the stomach will generally be found to suffer from it, if it be continued after the disordered action of the liver is removed. In the course of the treatment, it will often happen, that a motion is found to be considerably more natural than those that preceded it, and it is apt to be assumed from this, that the secretory function of the liver is restored to its healthy state, and that a further employment of means, for this purpose, is unnecessary. These appearances of improvement, however, are often only temporary, the motions of the succeeding day being of the same unnatural colour as before; and it is not therefore advisable to discontinue the use of the medicines, until a permanent and decided improvement in this respect takes place. It must be here remarked, however, that it is no unusual thing, especially in infants,

to find the appearance of the fœces to be natural, some hours after the commencement of a sudden attack ; and in the same way they will often continue to be passed in a green state after every other symptom of disorder is removed. These facts, which I have repeatedly observed, might seem at first view to countenance the notion of the complaint being independent of any biliary disorder ; though they only serve, if duly considered, to prove this truth more fully ; for as the symptoms of disorder arise from a derangement in the actions of the liver, the morbid secretions, arising from this state, will not be seen until some hours after the commencement of the attack ; and on the other hand, by the renewal of the healthy secretion, there will be actual health, though the bowels should, for a short time, continue to discharge those morbid secretions which they had previously contained.

It has already been observed, that active purging is not desirable for the cure of marasmus, since the disorder consists in a derangement of the function of the liver, and the only purpose in ordinary cases, that is required from opening medicines, being merely to remove the morbid matters from the bowels. The medicines that I chiefly em-

ploy for this object, are the different purgative salts, which I prefer on account of their action being principally exerted on the small intestines, and from their having the property of increasing the secretions of the bowels. In employing these medicines, I have found it convenient to give them in small doses, largely diluted with water; for, when they are taken in this way, they act without irritating the stomach, and produce the required evacuations without those inconveniences, which are experienced from medicines of less activity, when given in a concentrated form. In the diluted state, in which I thus administer them, I consider that I am imitating, as far as it is practicable, and perhaps useful, the saline aperient springs of this country, whose powers in relieving, and not unfrequently in curing, the various forms of this disorder, have been long and deservedly distinguished.

In giving the purging salts, it often happens that the dose taken for the first two or three mornings, will produce very considerable effects upon the bowels, and afterwards the same will require to be repeated two or three times during the day, before a single effect is produced. There is, therefore, attention required to watch the effects of the

medicines during the time they are taken, so that the proper purgative operation be induced; for in some persons, very small doses of calomel are sufficient to produce their effects upon the system, if the bowels should from any cause be confined. When, however, the medicines fail after some time to produce their accustomed effects upon the bowels, it may be concluded that they are not exerting their due influence upon the function of the liver; for when their action is of the proper kind, their power of acting upon the secretions of that organ, becomes more considerable in proportion as the use of them is continued. In these cases, it will generally be found useful to give, for a night or two, a larger dose of calomel than usual, following it up on the succeeding morning with a larger draught of the aperient medicine. In some instances, however, the saline purges are found insufficient to move the bowels, and a more active medicine is required. This, from some cause not easily explained, is a common occurrence in children, and it is often surprising what powerful medicines they sometimes need to procure a movement from their bowels. Generally speaking, indeed, the saline medicines prove too inactive with them, an ounce of the common infusion of senna

being often barely sufficient, when given daily, to procure the evacuations that are necessary.

It has been recommended, to combine the purgative medicine with some bitter and tonic infusion, on the supposition that the disordered condition of the digestive organs originates from, or is kept up by, a weak and irritable state of them. I have adopted this plan on various occasions, but I have thought, in many cases, it increased the febrile irritation, where the aperient, with which the tonic was combined, did not act sufficiently on the bowels. If given indeed, before the disorder is considerably removed, they seldom fail to aggravate it, increasing the thirst and fever, and the pain about the stomach or bowels; and particularly so in children, with whom, it may be observed, tonics seldom agree, and for whom they are happily seldom wanted. I therefore now defer the use of medicines of that class until the convalescent state; avoiding, by this means, the difficulty, which must be otherwise sometimes encountered, in distinguishing the natural causes from those accidental ones, which occasionally increase the fever.

And here I would remark, that simplicity of prescription cannot be too much attended

to in the treatment of this, as well as indeed of other complaints ; for the contrary practice leads to false conclusions, and to a false experience ; symptoms, as I have not unfrequently witnessed, which originate from the medicine, being sometimes classed among those proper to the disorder. In those few cases, where tonics are considered as decidedly necessary, as sometimes in the aged and in delicate females, or where the stomach has become much weakened by the long continuance of the disorder, it will be found of some advantage to give a diuretic with them ; as it tends considerably to obviate those effects, which have been just noticed, as arising from their too early employment.

But beside the employment of medicines of the purgative class, the exhibition of an emetic is often found of considerable service in relieving, and sometimes in removing, the disorder. It is chiefly, however, useful at the commencement of the attack, when, by clearing the stomach of the phlegm which is always present in it, the morbid source of irritation is thereby apparently cut off. In the confirmed state of the complaint, I have rarely seen it useful ; though the frequent nausea, which is often present in such cases, would appear to indicate its use. But the

sickness which is observed on these occasions, is dependant upon an irritation communicated from the liver to the stomach, for it is relieved by means that have no direct action on the latter organ. And this leads me to remark, that a free hemorrhoidal discharge, occurring in this disorder, has frequently a beneficial effect in relieving the symptoms of nausea and oppression about the stomach, and which it appears to do by removing the congestive state of the liver. This fact, indeed, I have remarked so frequently, that I have in many cases regretted that I could not produce this discharge artificially, since it appears capable of affording very early relief to the symptoms, and of preventing those copious discharges from the liver, which, under the names of melaena or hæmatemesis, are occasionally proving fatal.* To many, however, it may seem perhaps

* Since the above was written, I have seen a communication to one of the Medical Journals, in which a practice of introducing leeches into the rectum, is noticed as being commonly pursued by the continental practitioners, in disorders where internal congestions are suspected to be present. I cannot for a moment doubt of the utility of such a treatment, and should be glad to pursue it in those cases where, from the high degree of congestion in the liver, there are reasons to apprehend a hemorrhage from that organ.

something like refinement, to contend for the utility of these natural and local evacuations of blood in this disorder, whilst I decry those of a general kind; but the fact of general venæsection being seldom of service, either in the acute or chronic form of this complaint, has come so frequently under my notice, that I feel no hesitation in affirming, that it has no power in subduing the causes, and is rarely needed for the relief, of any of their immediate effects.

And here, it may be observed, that the practice once advocated, and still too much pursued, of what is termed prescribing for symptoms, is in no disorder less proper than in this. The debility, which is sometimes so considerable as to render the patient unable to stand without support, will often be increased by those means which are generally considered by the attendants to be strengthening; for, until the cause which produces the indigestion, and the loathing of food which accompanies it, be removed, it will be in vain to calculate on relief from any assistance of this kind. In such cases, it is best to leave it, in a considerable degree, to the patient to determine when, and in what quantity, he shall take food; and where an absolute disgust is felt for food, it is certainly proper

to abstain from it. And this rule applies with equal force to those cases, where a morbidly craving and voracious appetite exists, as it is proper to permit the patient to indulge it; observing only that the food be of a wholesome kind; for in some, this constant returning desire to take food is so strong, and attended by such faint depressing feelings at the stomach, as to occasion considerable suffering.

From the benefit which opiates afford in some states of watchfulness, it might be expected they would have some effect in procuring rest in this disorder. The effect of them, however, is always unfavourable; for they aggravate the cause which occasions the restless state, and interfere with the operation of those medicines which are required to remove it. The same, likewise, is true with respect to the various means which are directed for the cough in this complaint; for many of them are sickening to the stomach, and in its disordered state are very likely to do further injury to the digestion, and are, at the same time, of little even temporary service. When no disease is induced in the trachea or bronchia by it, which I have reason to believe occasionally happens, the cough is very quickly relieved by the means which

are directed for the correction of its cause, being generally one of the first of the urgent symptoms that disappears.

Sometimes there is, in this complaint, an appearance of spontaneous diarrhœa, which, though arising from the irritating nature of the morbid matters in the primæ viæ, may be mistaken for that which arises from an increased mucus secretion into the bowels, and attempts be made to check it by opiates and astringents. Such a practice will not fail, however, to prove unsuccessful; for those means have but a very limited control over this kind of diarrhœa, and all they have is injurious. A slight examination, indeed, of the motions, will convince the practitioner that the diarrhœa depends upon a disorder in the functions of the liver, and that the only mode to check the loose state of the bowels, will be found to consist in restoring the proper biliary secretion. The fact is, that in this state of the bowels there is, however extraordinary it may seem, the same need of purgatives, as where actual constipation exists; and that, instead of increasing, they lessen the number of the evacuations: for these repeated motions are the consequences of a stimulus, imparted to the bowels by the food, which passes undigested through them, in a ferment-

ing and acid, and sometimes in a putrid state. By restoring the secretion of the bile, which corrects this putrid and acid tendency in the ingesta, and aiding the descent of its fœculent parts through the bowels, the morbid stimulus, which produced the diarrhœa, is no longer given, and the diarrhœa itself is removed.

In all cases, therefore, of diarrhœa, attendant upon this disorder, it is absolutely necessary to inquire concerning the colour of the discharge ; for, if it be of a bilious kind, opiates will be improper and aperients unnecessary, as the discharge, in this case, is the natural remedy for the complaint, and only requiring attention upon its becoming excessive. In many cases, where improper means are employed to stop it, in its descent through the bowels, a feverish state of the system ensues, from the irritation produced by its accumulation.

The febrile symptoms, attended with heat of skin and thirst, may, in many cases, from their urgent nature, be thought to require some of those saline and antimonial diaphoretic medicines, which formerly shared so much of the confidence of physicians ; but the reasoning that applied to remedies for the cough and debility, is equally applicable

here. The fever and thirst derive their origin from the conjoint irritation of morbid matters in the *primæ viæ*, and the deranged action of the liver; and until these states are removed, no subordinate evacuations are available. Besides, the action of the calomel, which is designed for the liver, will be diverted to the skin if diaphoretic medicines are combined with it, and its pursued operation will be lost. From observations repeatedly made upon this fever, and upon the effects of medicines in subduing it, it has always appeared to me to be more relieved by the medicine, which was directed to correct the disordered biliary secretion, than by evacuations from the bowels; as I have found it often indeed as intense on the evening succeeding considerable evacuations, as it had previously been. And on the other hand, there is often a marked abatement of it before any evacuation has taken place, evidently shewing, that its principal cause consists in a disordered action of the liver, rather than in irritation from morbid accumulations in the *primæ viæ*; a small dose of calomel, in fact, taken at bed time, having more effect in subduing the fever and procuring rest, than any combination of those medicines, which are in the highest estimation for these purposes.

The apthous affection of the mouth, which is so common an attendant upon this disorder in children, is not unfrequently treated with topical applications ; and where the cause of the disease is not neglected, there is no objection to be offered against their use ; but as it is a complaint which, when originating from bilious irritation, yields immediately with the cause that produces it, I have never of late had recourse to them ; a few minute doses of calomel, repeated at short intervals, having generally the effect of removing it.

The good appetite, which attends the early and chronic stage of this disorder, frequently leads the friends of persons affected with it to believe, that the listlessness, and inactivity, and dispiritedness depend upon some moral causes, and they are importunate with them to shake them off. The fretfulness of temper, likewise, which is a symptom of the complaint, and which is observable in children and infants, while labouring under it ; and that dulness also which children exhibit in this disorder when appointed to get their tasks, are improperly considered in the same light, and punishments, as undeserved as they are unprofitable, are improperly resorted to for their correction.

In directing the treatment of this complaint,

it is of considerable importance to be precise in the rules which are given, respecting the food, for it is no unusual thing, for the patient to abandon the use of the accustomed and proper kind, and choose some other decidedly injurious. In general, children in this disorder, dislike their accustomed meal of bread and milk in a morning, and it is proper to substitute some other one in its place; but on the accession of the febrile stage of the complaint, they often demand cold milk with avidity, for the purpose of allaying the thirst, by which they considerably increase the disorder. In every stage of this complaint, the milk of cows appears to act unfavourably; the prevailing acidity in the stomach and bowels in this complaint, having the effect of changing the cheesy part of the fluid into a strong curd, so that portions of considerable hardness, are often thrown up from the stomach, or passed from the bowels, in an undigested state, and presenting an appearance not unlike the white of an egg that has been boiled and cut into pieces. As a general rule, with respect to the diet for children and adults, it may be stated, that, where the appetite is good or morbidly craving, too much care cannot be taken to allow nothing that is not of a perfectly plain kind, both as

it regards the nature and culinary preparation of it; and that, where the appetite is impaired or extinguished, it is better to wait for a natural appetite than tempt it by an improper diet. For if the plentiful appetite for plain food, which attends the first stage, be inadequate to strengthen the system, there can be little hopes entertained, in its second stage, of benefit from a food that is unwholesome in its nature, and which, though taken in but small quantities, is, nevertheless, swallowed with disgust. And here it may be remarked, that, generally speaking, that food may be accounted plain which is cooked plainly; and that those articles of food which are accounted improper, are partly so by the unnatural combinations which the cook or confectioner forms with them; not forgetting, at the same time, that we may render the simplest unwholesome, and the compounded food poisonous, by the manner in which we indulge in their use. It is proper to notice, however, that beef, and likewise most young meats, are often found to be difficult of digestion, and malt liquor will seldom agree with the patient; whilst wine frequently produces a distressing acidity in the stomach. To children, indeed, these last are inadmissible at every stage of the disor-

der ; and to adults they are rarely required, and may be often injurious, particularly malt liquor, if they be given before the healthy secretion of the liver is to a certain extent renewed.

But on these points, an important distinction must be attended to : the principle upon which a cautious, and somewhat abstemious regimen is recommended, is founded on the imperfect powers of the stomach, and not upon any organic disease of the liver, which is erroneously believed to exist as the cause of this disorder ; for, when the stomach becomes equal to the digestion of a full and nourishing diet, with a moderate allowance of wine, there is a positive advantage in allowing it ; since it seems to strengthen, in a very material degree, both the stomach and the system, thereby more readily confirming the recovery of the patient.

It has been stated that the most common cause of this complaint in infants, is the improper food with which they are fed, some being incapable of digesting any artificial preparations of it ; becoming, where the attempt is made to bring them up by what is termed the hand, so severely affected by this disorder, as to leave no alternative between a fatal result, and an immediate return to the

use of their natural sustenance. For though an infant, under these circumstances, may be temporarily relieved for a day or two from its disorder, it seldom fails to relapse again to its former state ; and if not carried off by convulsions, it gradually wastes under, what is supposed, some internal organic disease, but in reality, from a congestive state of the liver, as I have several times ascertained by examination after death, and which is the consequence of an indigestion, commencing in the stomach, from the improper nature of the food.

To attempt, therefore, to relieve an infant from this disorder, whilst the cause of it is permitted to remain, will prove as fruitless as it must appear irrational. So often, indeed have I witnessed the infants of the poor perish, notwithstanding every attempt to save them, solely from their being deprived of the breast of their mothers, that there is no fact upon which I can speak more confidently than upon this, nor which I feel more anxious to press upon the attention of the reader. The justificatory plea, which is sometimes set up for neglecting this duty, and which, I regret to add, is countenanced by some practitioners, that nursing is weakening to the mother, or unsuited to the infant, is an error I do not hesitate to pronounce to be of vital

importance, and which merits the most unqualified reprobation. For, where an infant is confined exclusively to the breast, I am authorized by observations long directed to the subject to declare, that, with respect to the mother, there is none of that debility which an erroneous view of the subject leads so many to expect; but that, on the contrary, there is a feeling of the highest health, the appetite and digestion being vigorous, whilst the supplies of milk are both regular and abundant; and that, with regard to the infant, the process of dentition being neither premature nor difficult, it enjoys, as far as it depends upon the food, an absolute exemption from disorder; the thin, and seemingly spare, diet afforded by the milk, satisfying its utmost wants, and invariably imparting to it a degree of vigour and firmness, which no artificial mode of rearing can bestow.

Among the means that may be accounted most valuable, as auxiliaries to the strictly medical treatment of this disorder, there is no one upon which I so much rely as on the use of the shower bath, or on what is equally useful and more generally acceptable, the practice of sponging the body with cold water, upon first rising in a morning. The power which this possesses of strengthening the system, and of improving the digestion,

and of imparting a feeling of health and vigour to a convalescent in this disorder, is often remarkable; the invalid frequently being enabled, under its use, to digest food, which on all former occasions had disagreed with him, and to resist the influence of many of those causes, which had before either produced or aggravated his complaint. In this disorder, it seems, indeed, to answer all the valuable purposes which sea bathing has been distinguished for; and where change of air is not required, it appears fully suited to accomplish them. Vinegar or salt is sometimes added to the water, and probably with the advantage of increasing its activity.* The substitute, however, which sponging is capable of becoming for sea bathing, is not to be understood as rendering a removal to the sea side, or a change of air, undesirable; for in many cases, it is of the utmost consequence as the means for establishing the health. But of them both, it must be observed, that the advantage which they afford consists chiefly in confirming the recovery, being seldom of service until the principal cause of the complaint is removed, or in the course of removal; for, where sponging is

* As a good substitute for sea water, I am accustomed to advise the napkin, with which the patient is wiped dry, to be rendered salt by being dipt, the preceding day, in water containing some common salt.

employed early in the disorder, there is not that glow upon the surface, which is at once the proof, and perhaps the cause of its usefulness: and where a change of air is employed, under the same circumstances, the patient is seldom rendered better by it.

It is usual for patients, in the early stage of this disorder, to feel better when walking out; and afterwards, as the complaint advances, to feel a repugnance to every species of exercise; the wind in particular being rarely agreeable to them, however warm the weather may be. In these cases, I have seldom seen advantage in urging them to take exercise, having generally found them ready to take it as they become better, and were able to enjoy it. And this rule applies, likewise, to indulging the desire, which is sometimes manifested by the patients, to continue late in bed in a morning; for, in general, it will be found proper for them to remain there, as it is often only at that time they are able to sleep, or to be refreshed by it. The cause of the debility which is observed, in those who lie much in bed, is in a majority of cases improperly referred to the bed; the attendants in this, as in many other cases, erecting an effect into a cause. Where, indeed, a patient has been much disturbed in his sleep during the night, the refreshing sleeps of the

morning afford him strength ; for I have known many labouring people complain, that, in consequence of their dreams relating to their work, they have felt more fatigued on their rising in a morning, than they ever did from a common day's work in health. The clothing of patients in this complaint should be warm, especially about the feet and legs, which are peculiarly liable to become cold, even when the other parts of the body perhaps are preternaturally hot.

In the course of a patient's recovery from the acute form of the complaint, in which the secretion of the bile had been scanty in quantity and inert in quality, it is a very usual and a very favourable symptom, to find the pain, which had been previously fixed about the stomach, complained of as affecting the bowels ; as such pain is at once the proof and the effect of a more healthy and active biliary secretion passing through them. From the occurrence of this pain, and sometimes from the copious evacuations which take place at first from the bowels, there is often a suspicion entertained of the patient's becoming worse ; and in many cases the young practitioner will feel his confidence waver from the slow decrease, or occasional aggravation of the symptoms of the complaint. In all such cases, the surest guide

that can be offered is the appearance of the tongue and of the alvine discharge ; for, as long as these present unnatural appearances, and there is no organic disease to account for them, he may assure himself that there is no path that will lead him so surely to the result he desires, as a steady, but temperate, employment of the means which correct the deranged condition of the biliary function, and unload the *primæ viæ* of their morbid contents. It not unfrequently happens, indeed, that the patients in this complaint, are reduced to the last state of emaciation and weakness, and yet, by a steady perseverance in these means, the health and strength are perfectly, though sometimes only slowly, restored. So great, indeed, in some cases, is the weakness, that I have seen adult patients regaining their strength so slowly, as to be unable to walk alone at the end of a month after the commencement of their recovery. In fact, this disorder has no period, if organic disease be not induced by it, nor any degree of weakness or irritation proper to it, which should discourage the practitioner from attempting its removal ; for there is no state of suffering and weakness in it, that may not be lessened by correcting the biliary secretion, and unloading the bowels of their morbid and often putrid accumulations.

CASES.

SECTION I.

THE following cases are given to illustrate the views entertained concerning the nature of the bilious diarrhœa, of the cholera morbus, and of melæa, and of the power which calomel possesses of exciting the imperfect, or in subduing the inordinate actions of the liver, present in these disorders.

The cholera morbus, it has been already observed, is to be viewed as only one of the modes, by which the congestive state of the liver, constituting marasmus, is relieved. From the violent and more palpable symptoms, which attend the copious secretion of bile, it has been usual to view these as forming the whole complaint. The disorder, however, commences before the discharge of bile, and there may be, therefore, said to be two-stages of it.

In the first stage, there is present a congestive state of the liver, giving rise, when severe, to that condition of the system, which

in fevers is known by the name of collapse. When occurring in infancy and youth, especially in the former, it is not unfrequently fatal; and even in adults, it is often accompanied with fainting and other symptoms of an alarming character. In this stage, there occurs an irregularity in the circulation, and an imperfect supply of blood to the brain, and to the extremities. The powers of the system appear oppressed; the extremities lose a portion of their heat, and often acquire a livid colour; there is a general restlessness, along with much anxiety and oppression about the stomach, attended with nausea and retching. In the infant, there is frequently the fatal convulsion, which arises from the diminished energy of the brain, and which is indeed only a modified and higher degree of the general restlessness. In this stage, there is, in fact, a manifest struggle between the oppressive influence of the complaint, and the vital energies of the system; the copious secretion of bile, which is produced, being the consequence of those energies acting to excess, to repel and remove it. In many cases in infants, and in some instances, as well in adults as in children, for a want of energy, or from other causes, the natural efforts of the system do not remove the congestive state of

the liver ; and hence, become established the proper symptoms of the acute form of marasmus.

When that secretion of bile is induced which forms the second stage, it is usually in excess, and of an acrid and morbid nature, becoming, when very considerable, the source of other disorders. Of the two stages of this complaint, the first is that in which there is most danger, and in the treatment of which, the most decisive measures are required. From the exhausting and almost incessant nausea and retching, which attend the severer form of this stage, with the coldness and lividness of the extremities, and the sunk and torpid countenance, and feeble pulse, it is sometimes thought that wine and cordials, and even opiates, are imperatively called for, and that they are all that can be, in these cases, trusted to. Such a view of the case, however, I can confidently affirm, is fraught with practical evil ; for the wine and cordials thus employed, as I have too often had occasion to observe, only aggravate the cause of those symptoms which they are designed to relieve. In the first stage, the motions are always highly unnatural, and if there be a lax, it is attended with much straining, and the discharge is watery and slimy, and sometimes of

the colour of tar, or is chiefly composed of dark venous blood. The pain of the bowels, in the severe forms of the disorder, is sometimes excessive, and arises, probably, from their partaking of the congestion of the liver, as well as from the irritating and acrid quality of the small portion of bile secreted, and from the distention produced by the fermenting state of the undigested matters passing through the bowels. In the second stage, the motions are of a pale yellow or yellowish green colour; and the pain, in these cases, arises from the irritation, given to the bowels by the more stimulant quality of the bile, or from the natural mucous secretions of the bowels, which should have perhaps defended them, having been previously purged away. In the first stage, therefore, it is the secretion of the bile which requires to be renewed, and rendered healthy; and it is only in the second, or that in which the secretion is excessive, and when, by the excess, the powers of the system have become exhausted, that wine and cordials are admissible or necessary.

It has been already observed, that calomel possesses the power of increasing the biliary secretion when deficient, and of lessening it when in excess. This, to some, perhaps, may appear an unusual property in a med-

icine ; but the deficient and excessive actions of the liver, which constitute the two stages of the disorder, are both morbid states, and it is one of the properties of this medicine to correct the disordered actions of the liver. In the following cases, it will be seen that the practice pursued, in the treatment of the cholera morbus, consists in giving a third, or a fourth part of a grain of calomel, according to the age or other circumstances of the patient, every half hour, for five or six successive hours, or until the sickness abates ; and with such success in renewing the secretion when interrupted, or in lessening it when excessive, and in allaying the sickness consequent upon these states, as rarely to require, excepting in cases of unusual severity, a continuance of the medicine beyond the sixth or eighth dose. To those accustomed to consider calomel to be only useful when administered in large doses, because it requires to be so employed in puerperal inflammation, and in some other acute diseases, the minute quantities here given may be thought perhaps unlikely to be efficient ; but to such it may be observed, that, until we know something more of the manner in which this medicine acts, it is impossible to determine by any other rule than actual experience, the dose required to render it available for any specific purpose.

Of the subjoined cases, the first is a bilious diarrhœa; the five which succeed it, are those of cholera morbus in its second stage; and the seventh, eighth and ninth, are those of the first stage, and which, along with other symptoms denoting severity, were attended, and to a certain degree relieved, by the occurrence of melaena. These cases, of cholera morbus, it is necessary, I trust, to observe, are not selected from others where the success was less decisive; for, among the great number, which my public appointments occasion me to see, I do not remember that I have had any, during a period of ten years, where the practice here recommended was less successful than in those now given.*

* The view here given, of the nature and mode of treating cholera morbus, has been entertained and acted on by me during the ten years that I have resided in Hull; and I owe it to Dr Curry, the distinguished Lecturer on the practice of medicine, at Guy's Hospital, to acknowledge that it was from hints, derived from observations delivered by him in the course of his lectures, on the power which calomel possesses of promoting the secretory function of the liver, that I was led to adopt this treatment. Within these few years, a view of the pathology of cholera morbus, similar to the above, has been given in an able work on the diseases of tropical climates, by James Johnson, Esq. but which I feel it necessary to observe, I did not see, until directed to it by a marginal note, in a work lately published, and after these pages were prepared and announced for publication.

CASE I.—*F. aged 36, admitted May 23d, an out-patient of the Infirmary.*

Has been affected with a diarrhœa during the last five weeks, having daily, from ten to fifteen fluid motions of a light yellow colour, with considerable pain in the bowels. Appetite good, pulse natural, urine high coloured. Has employed all the usual medicines, under a skilful practitioner, during most of this period, but without any abatement of the complaint. Has passed a considerable number of motions this morning.—*R. Calomelanos gr. iv. micæ panis q. s. ft. pilulæ xvi. e quibus, St. i. sexta quaque hora.*

4th day.—Has taken a pill regularly every six hours. Was only moved thrice on the day following her admission, and has had only one motion daily since, but has still some pain in the bowels.

5th day.—Has had only one movement to-day, and feels quite well. Pills to be discontinued for two days, when she will be seen again.

7th day.—The lax returned two days ago in the evening, and had eight discharges on the following day. Began to take the pills again last night, and has had only three movements to-day.—*The pills to be continued.*

10th day.—Has had only one motion daily since last report, and has taken the pills regularly. Has still some pain in the bowels.

13th day.—Has continued to have only one movement daily. Two days since, the alvine discharge acquired its natural colour. Has still some pain in the bowels.

The pills were now discontinued, and some slight means were ordered to relieve the spasmodic affection. On the 20th day, reported herself free from complaint.

CASE II.—*M. R. aged 20, August 7th.*

Began in the night to be affected with a severe nausea and sickness, and with an oppression and pain at the stomach, vomiting up a considerable quantity of a green and bitter fluid. Has been sick almost every few minutes during the morning; pulse natural; bowels have not been moved since yesterday.—*A third part of a grain of calomel to be taken every half hour, during six hours, or until the sickness is removed.*

2d day.—Took the twelve pills that were ordered, and was not sick after taking the third pill. Has left her bed room to-day, and is able to eat, and feels quite free from complaint.

CASE III.—*Cole, aged 50, admitted August 7th a patient of the Dispensary.*

Has been affected with vomiting and purging during the last four days. Took a medicine which stopt the latter, but the sickness

continued. Had much pain and uneasiness about the stomach, before the sickness began. The fluid, brought up from the stomach, is of a dark yellow colour, and of a bitter taste. Is sick nearly every few minutes.—*A third part of a grain of calomel to be taken every half hour.*

2d day.—The sickness stopt after the seventh pill; has had no sickness since, but complains of weakness, and has no appetite.—*To have a draught of bitter infusion every four hours.*

3d day.—Has had no return of sickness, and is free from every symptom of her complaint.

CASE IV.—*Jane Wilkinson, aged 12, admitted August 8th a patient of the Dispensary.*

Has been vomiting almost constantly, during the last twenty-four hours, a greenish and bitter fluid, preceded by much pain and oppression about the stomach.—*To have a third part of a grain of calomel every half hour.*

2d day.—Was not sick after the fifth pill, and has continued well since.

CASE V.—*Mary W. aged 5, August 4th.*

Is affected with a vomiting nearly every half hour, of a yellowish green fluid, attended with pain and frequent purging. Has been ill of this complaint during the last three days. Has much thirst and fever.—*To have a quarter of a grain of calomel every half hour.*

2d day.—Ceased throwing up after the third dose, and has not been sick since. Bowels are now regular. Has no complaint but weakness.

CASE VI.—*Bentley, aged 76, New Dock-street, admitted a patient of the Dispensary Aug. 3d.*

Eight days ago, became affected at the stomach with great oppression and pain, which were soon succeeded by nausea and vomiting, along with a looseness of the bowels. On the third day after the attack began, he became much worse, and has been throwing up and purging almost constantly ever since. Has much pain in the stomach and bowels, and severe cramps in the legs. Has had a great many stools during the last night and this morning, and throws up almost every half hour. The discharge upward is very bitter and green, and that from the bowels is of the same colour. Pulse feeble, the countenance sunk, and the mind indistinct.—*To have a quarter of a grain of calomel every half hour.*

Eight p. m.—Has taken only six pills since the morning, not having been able to guess the time. Has been affected with sickness and purging thrice.—*Pills to be taken every half hour.*

2d day, Ten a. m.—Has had only one movement from the bowels since last night, and has thrown up twice, once last night, and again this morning. The fluid thrown up is less

yellow and bitter than it was. Has not had so good a night before, since he began to be ill. Does not feel sick. Has taken eleven pills.—
The pills to be continued every hour.

Eight p. m.—Has passed a good day. Has been sick once, and had one movement from the bowels, but not of so loose a kind. Has no nausea, and no pain in his body. Has taken twenty-two pills since he began their use.
 —*To take a pill every four hours.*

3d day, Ten a. m.—Has been sick once this morning, but the fluid thrown up was not bitter. Has had a very good night. Has taken only one pill during the night, as he was fearful they contained opium, and were making him costive. Bowels quite regular.—*Pills to be discontinued.*
To have an infusion of columbo every four hours.

Eighth p. m.—Has passed a good day.

4th day.—Slight nausea at times. Has eaten a little, and had some wine.

5th day.—Has passed a good night. Has thrown up his medicine once, but there was nothing with it. Has eaten some bread. Bowels regular.

6th day.—Has passed a good night, and only thrown up a little, nearly colourless, fluid this morning. Has eaten some meat, and relished it.

7th day.—Has had no returns of sickness, and the bowels are regular, and their contents of

a natural appearance. During the following days, he continued to recover, having no complaint but weakness.

CASE VII.—*Mary Brown, aged 70, Myton-street, admitted a patient of the Dispensary, Sept. 8.*

Two p. m.—Became affected last night, after returning from gleaning, with great pain and oppression at the stomach, attended with slight delirium and frequent fainting, and a vomiting of an intensely green fluid, and a purging of a fluid of the colour of soot; and this morning there has been a stool, consisting chiefly of dark venous blood. The sickness is nearly incessant, the patient is very indistinct, and the pulse intermitting and very feeble.—*To take one third of a grain of calomel every half hour.*

Eight p. m.—Had no sickness or motion after the sixth pill, but complains still of pain in the bowels.—*To take one of the pills every hour, if the sickness should return.*

2d day.—Has passed a pretty good night, and has had no return of the sickness, and has had no movement from the bowels. Has taken some breakfast. Has still pain in the bowels.—*To have a dose of a cordial mixture every four hours.*

3d day.—Found her up, and making no complaint but of weakness.

CASE VIII.—*Thomas Carr, Dickson's-Entry, Mytongate, aged 73, admitted a patient of the Dispensary, Aug. 6.*

Has been sick nearly constantly during the last eight days, throwing up, with little interruption, a yellowish green and bitter fluid. Is much affected with a looseness and pain in his bowels, and the sickness and vomiting continue. Has much thirst, tongue foul, pulse feeble and irregular. Has been ill during the last three months, with pain at the stomach and loss of appetite; with weariness, and an unusual aching in the limbs, and drowsiness in the day, with great watchfulness in the night.—*A third part of a grain of calomel was directed to be taken every half hour, during six hours, or until the sickness should be subdued.*

2d day.—Had no sickness after taking the fourth pill. Has had only one stool since. Has no sickness now, but has still some pain in the bowels, and complains of great weakness. Pulse regular, tongue nearly clean.—*The pills were discontinued, and a cordial mixture ordered.*

As this patient was considerably relieved, he was not visited on the following day, and on my calling on the next one, I found he had had a severe return of his complaint, having passed, after suffering much pain and oppression about the stomach, several loose stools, which the

attendants stated were of the colour of soot, and of a nauseous and death-like smell. This morning has had two discharges, consisting chiefly of dark blood. Has much pain about his stomach and bowels, and has had no sleep during the last night. Tongue very foul, pulse feeble and irregular, countenance considerably sunk. Is very indistinct.—*To resume the use of the pills, taking them as before.*

3d day.—Has passed during the night several stools, of the colour of coffee grounds. Pulse and other symptoms improved.—*The pills to be taken every hour.*

4th day.—Fæces of a much better colour, having a slight yellow tinge. Has had a good deal of sleep during the night. Has still pain in his bowels. All the symptoms, with the exception of the appetite, decidedly better.—*Pills to be taken every four hours, with a dose of the mistura cretacæa.*

The appearance of the motions, on the following day, were quite natural, and in a few days he became, in every respect, well, and has had no return of his complaint since.

CAES IX.—*T. W. aged 14, September 12th.*

Is affected with a considerable degree of pain and oppression about the region of the stomach, and with an almost incessant retching and vom-

iting, and a death-like coldness and lividness of the hands and feet, and blackness about the mouth; the countenance expressing much anxiety and restlessness, the pulse quick and compressible, the bowels confined, the surface of the body and head is covered with a cold perspiration, the matter discharged by vomiting, sour and greenish. Was seized last night, suddenly, with these symptoms, after a fortnight's indisposition, under the chronic form of marasmus. Wine has been given to him, under a persuasion that he was at the point of death, and various means have been employed to restore warmth to the extremities without effect.—*A third part of a grain of calomel was ordered to be given every half hour, during six hours, unless the sickness were previously stopt.*

2d day.—Only a few of the pills ordered have been taken, as he was considered by his friends to be dying, and that no means could be useful. The coldness and discolouration of the extremities continue, and the sickness and oppression are unrelieved. Has had no stool.—*One of the pills to be taken, punctually, every half hour, during six hours, unless the sickness be previously relieved.*

3d day.—Has taken all his pills, and the warmth and natural colour of the extremities have returned, and the sickness, and pain and

oppression very much abated ; the bowels are confined.—*To have a draught, consisting of a weak solution of the sulphate of magnesia, every four hours, until an evacuation be procured ; and the pills to be omitted.*

4th day.—The sickness and other symptoms returned, in a considerable degree, during the night, and passed this morning several stools, which are said in colour to resemble soot ; the extremities, however, are warm, and of their natural colour.—*To have his pills again every half hour, during six hours, if the sickness and other symptoms are unrelieved.*

5th day.—Has taken all the pills, and has had several discharges from his bowels of a better colour. Has no sickness, and the oppression and pain are very much relieved. Has taken some food.—*To discontinue the pills—to continue the use of the aperient mixture.*

The alvine discharge, on the succeeding day, was much improved in colour, and the other symptoms, likewise, were further relieved. Had, however, still some pain in his bowels. On the following days he gradually got relieved from the pain, and was able to sit up and to take some food, and became shortly afterwards convalescent.

SECTION II.

In this section are given seven cases of marasmus, as it is found occurring in children, each one exhibiting some symptoms which are not observed in the others.

The first is an example of the complaint, as preceded^d and brought on by measles, exhibiting the symptoms usually met with in it, and affording, at the same time, an instance of the power which calomel possesses of subduing this disorder, by correcting the biliary secretion ; for in this case, calomel is the only medicine which is taken, and there is no purgative effect from it, the changes which are produced, consisting in a renewal of the healthy and bilious appearance of the alvine discharges, and a consequent regular and natural evacuation of them.

The second, is also an example of the disorder under its common form. This case had continued two years, having preserved its chronic state during most of that period, but passing, at length into the acute stage. Among the other early and beneficial effects of the medicine employed, is the correction of the loose state of the bowels, by the influence which it exerts over the biliary secretion.

The third case, is a well marked instance of the chronic form of the disorder, when about to pass into the acute stage.

The fourth, is an example of a mild form of the bilious cough, which is sometimes met with in this complaint, and which, with the pain in the left side and other symptoms attending it, occasions a strong resemblance between it and an incipient phthisis pulmonalis.

In the fifth, there is a permanent strabismus from cerebral irritation ; this last being succeeded, and most probably relieved, by the sympathetic irritation being transferred to the mouth ; producing a tumid state of the gums, and an aphthous ulceration of them and of the tongue, with a carious condition of the teeth. In the affections of the head, arising sympathetically from biliary derangement, a slight and temporary strabismus is by no means an uncommon symptom ; though the affection, most commonly occurring from cerebral irritation, is deafness. This symptom, I have met with in different degrees of severity, and of various duration. In some, I have known it to continue permanently ; though, generally, it yields to the means directed for the removal of its cause.

The sixth, is an instructive instance of the complaint, in which the cerebral irritation

induces a complete hemiplegia. The child, who is the subject of it, is of a scrofulous family, and had been, during the space of two years, almost constantly affected with the disorder under the chronic form, and in the last attack, and before my seeing her, a violent purging had for some time been induced by a vermifuge nostrum, though without affording relief. Having, in the course of a few days, become relieved from the disorder, a relapse is suddenly brought on by an improper indulgence in diet ; giving rise to so much irritation about the head, as to induce the hemiplegic affection. The renewal of the healthy secretion of the liver, removes again the irritation from the head, and the child is restored to health ; the state occasioned in the brain having, in this instance, no influence on any of these organs upon which the health depends, nor producing any visible diminution in the vigour of the intellectual faculties.

The seventh, is also an example of the disorder in the acute stage ; and in which there is that degree of cerebral irritation, as to induce not only a paralytic state of some of the muscles of voluntary motion, but such a degree of rigidity in others, as to render the back and lower extremities inflexible. Indeed, the rigidity was so considerable, during a month, that

the patient was unable at any time to be bent into a sitting posture, and he could be lifted in a perfectly stiff and extended state, by merely raising at the same time his ankles and head. A partial rigidity of this kind, is not very unusual in this complaint. I have seen it continue, uninterruptedly, for several days, in the flexor muscles of the toes of children, and in the muscles which turn the head. In this patient, the tongue was slightly paralyzed; and this is a symptom which, if I mistake not, is often present in the severe forms of the disorder, for few children have that distinct utterance whilst labouring under it, which they possess in health. And this state, as well as the marked imperfection in the memory, &c. which is observed both in children and adults, and the feebleness and trembling in the knees, may be considered as originating from an irritation of the same kind, differing only perhaps from the other in intensity.

In six of the following cases, I have contented myself with giving the symptoms, together with the result of the treatment, considering any detailed report of their progress unnecessary. There was in all of them, some occasional variation in the doses that were first ordered of the medicine, as the circumstances of each demanded; and this I have likewise

omitted to note, as these cases are given rather to illustrate the principle upon which the treatment is to be conducted, than to determine the doses of a medicine that may be needed, under the ever varying circumstances of patients. Of the seventh, I have given a detailed report.

CASE. I.—*Thomas Cox, aged 2, July 15 admitted a patient of the Dispensary.*

Is affected with much pain in the body and head, sleep much disturbed, appetite very bad, bowels sometimes loose, and at other times costive, the fœces white and slimy, has much fever and thirst, is listless, tedious, never standing down, perspires, and frequently starts during his sleep. Has been affected with these complaints during the last six weeks, and worse for the last fortnight. They began immediately after a mild attack of measles, was very well before. A small dose of calomel was ordered to be taken nightly, with magnesia the following mornings.

5th day.—Bowels have only been slightly moved, the alvine discharge dark, passes his water with difficulty. In other respects, is much better and plays about, and perspires but little during the night. Has not taken the magnesia, having resisted the attempts made

to give it. Has taken the powder, containing the calomel, readily.

10th day.—Stools of a much better colour, appetite good, and not craving. Has still some pain in his body. Is playful, and always on his feet. Has been much better during the last five days.

14th day.—Is free from complaints.

CASE II.—*Mary Parsons, aged 9, admitted May 6th a patient of the Dispensary.*

Has been unwell during the last two years, having generally had a pain in the body and an aching in the legs, with much weariness. Sleep greatly disturbed, hot about the head, and perspiring considerably during the night, appetite always good, and frequently craving, bowels sometimes loose, at other times costive, and their contents black and foetid. Has been always worse towards the afternoon. About three weeks since, began to be affected with a throwing up of her food, and a considerable looseness, both which symptoms continue. The appetite, during the latter period, until within a few days, has been very craving, at present it is bad. Is very considerably reduced in her flesh and strength, complexion sallow, and the countenance depressed and fretful. A dose of calomel was directed to

be given nightly, and a draught of an infusion of senna on each succeeding morning. At the end of a week, all her symptoms were better, looseness in particular being much lessened; and on the 22d, the bowels became regular, and their contents of a natural colour, the appetite good without being craving, and had no complaint but weakness.—*The medicines were discontinued.*

On the 25th, was quite well.

On June 8th, returned, as directed, to the Dispensary, and was found to continue free from complaint.

CASE III.—*John Jackson, aged 12 years, admitted June 4th a patient of the Infirmary.*

Complains of pain in his back and loins, which extends to his groin. Bowels sometimes loose, and at other times costive; appetite has been craving during the last year, but feels no benefit from his food. Has much pain in passing his water, which is thick and high coloured, feels listless and indisposed to walk, from a weariness and aching about his thighs and knees, and the middle of his back. Is best in a morning, becoming unwell towards the afternoon, sweats much during the night, and is unrefreshed by his sleep, is much reduced in his flesh and strength, complexion

sallow, tongue foul. Began to have these complaints about a year ago, soon after his return from the West Indies, where he was born. Was ordered a small dose of calomel nightly, and his bowels were kept in an open state by a mixture, consisting of an infusion of senna.

On the 17th, his medicines were discontinued and he was ordered the decoctum cinchonæ.

On the 24th, was discharged free from complaints.

CASE IV.—*Alfred Pullan, aged 15, admitted June 4th an out-patient at the Infirmary.*

Complains of a severe cough, which is worse towards night, attended with an expectoration of a tough phlegm, pulse quick, bowels stated to be at present regular, sometimes they are loose, tongue foul, appetite craving, is drowsy, dispirited, listless, sweats during most of the night, and often during the day under exercise, has some thirst with fever and pain in the left side, complexion sallow, is much reduced in his flesh and strength, and has been ill for several weeks. A small dose of calomel was ordered to be taken nightly, and an aperient draught on the following mornings.

Dismissed on the 17th, cured.

CASE V.—*Mary C. aged 3, May 25th.*

Has been generally ill since she was six months old, sleeping very badly, and having commonly some thirst and fever in the night, with profuse perspirations. The appetite has been either good or craving, bowels alternately loose and costive; their contents of a yeasty colour and foetid. Has been always better in a morning, becoming worse towards the afternoon. Had frequently fits until six months ago. In one of these, a strabismus was produced, which still continues. Is now so much wasted in flesh and strength, as to be unable to stand. The gums are very much swelled, teeth are black, and the tongue is covered with apthæ. Has had a great deal of medicine without relief, and the mother was advised, by the last practitioner who attended, to try no further means. Has five other children, who are healthy. A small dose of calmel was directed to be given nightly, and a draught consisting of the infusum sennæ, the following morning.

During the first week, there were three and four discharges from the bowels daily, which were dark and slimy; the appetite became good, without being craving; slept better, having had less fever and less perspiration: the mouth became well, and the child was

able to stand a few minutes at a chair. At the end of the second week, the stools had become more natural, the appetite good, had little thirst, and sat up through the day, and was able to walk with assistance given to both hands. These favourable symptoms continued; and the child, at the expiration of five weeks, had nearly perfectly recovered her flesh and strength.

CASE VI.—*E. Burton, aged three years and a half, admitted May 3d a patient of the Dispensary.*

Is affected with a considerable degree of fever, particularly during the night, attended with profuse perspiration and frequent screaming. Has much thirst, no appetite, stools dark and slimy, and foetid. Has a troublesome cough, and is much reduced in her flesh and strength. When a year and a half old, was ill in the same disorder, and was then very much reduced. After a short recovery, she relapsed, and her body became large and hard, and attended with much feebleness and listlessness, and very loose and unnatural stools, having a pale and sunk countenance, with great thirst and often a craving appetite. Had a great propensity to eat sand and chalk, and considerable itching about the nose. These symptoms continued for three or four weeks, having occasional

short intervals of relief. She is the fifteenth child, and one of the family has died from a scrofulous disease of the hip. Has been ill in this last attack about two months, and has been taking a nostrum for worms, which operated very powerfully upon her bowels, but without bringing away any worms.—*Habeat calomelanos gr. ss. hora somni et haustum infusi sennæ manā sequente.*

For five days, there was little visible improvement, but very offensive motions were discharged; at length the fever and thirst abated; she slept well, and the stools acquired a natural colour, and the appetite returned, and the patient sat up and played about as usual. Having discontinued seeing her, I was requested a few days afterwards to visit her, and was informed that she had had a relapse of her complaint in the night; and that she had been out a part of the preceding day at the house of a friend, where she was, contrary to my strict injunctions, indulged in some very improper food. At my visit, I found her in convulsions, and her right leg and arm completely paralyzed, with a considerable dragging of her mouth in the same direction. Pulse quick, but regular, bowels costive. A common purgative glister was ordered, with leeches and a blister to the head, and the for-

mer medicines were directed to be resumed as soon as they could be given.

2d day.—Has been constantly in convulsions since yesterday, and neither food nor medicine has been taken. Pulse quick, and preternaturally strong, bowels costive.

3d day.—Took one of the powders last evening, and a dose of the mixture this morning, and has had some dark slimy stools. The convulsions are less severe, and the patient is occasionally sensible.

On the following days she continued to improve, and the motions became at length of a natural colour; she sat up and assisted herself to food, and eat and slept well, and became soon perfectly free from her complaint. The paralytic affection, however, was unrelieved; and I was prevented shortly afterwards from knowing the further state of my little patient, by her embarking with her family for America.

CASE VII.—*James T. aged 12, High-Street, admitted March 3d a patient of the Dispensary.*

Is affected with considerable pain in his head and bowels, and a sense of a load at his stomach, or, as he expresses it, at his heart; answers questions by monosyllables, and in an utterance scarcely intelligible; is confined to his bed, and, from an unyielding rigidity in the

muscles of the body and lower extremities, is unable to be bent into a sitting posture, being so stiff as to be held extended straight, when supported only by the back of his neck and by his heels. This rigid state has existed for a fortnight. Tongue foul, bowels obstinately costive, pulse about 100 and of moderate strength, appetite bad, especially for meat, sleeps seldom more than two hours during the night, and becomes feverish towards evening, the feet being often at the same time cold. Takes no notice scarcely of any thing passing, and seldom speaks, but moans loudly and uninterruptedly whilst awake. Was attacked on the 6th of January with sickness and fainting, and threw up a considerable quantity of phlegm. On the day following his attack, he was better, but continued listless for three weeks, taking very little support, and constantly complaining of uneasiness in his head and bowels, and of a sense of a weight at his stomach; his bowels were very costive, and sleep much disturbed. During five weeks, he was attended by two medical gentlemen in succession.

The use of milk was now prohibited, and the following medicines were ordered.—*R. Calomelanos gr. iv. micæ panis q. s. ft. pil. vi. e quibus, St. i. omni nocte. Habeat infusi sennæ ℥i. bis in die, vel sæpius, ad alvum solvendam.*

2d day.—Has had one evacuation, which was lumpy, but reported to be not of a bad colour; is in other respects as before.

3d day.—Has had one evacuation from his bowels, consisting of half a pot full of formed, and lumpy, and dark fœces; moans incessantly, and is in other respects as before.

4th day.—Has had one slight and slimy stool. In every respect as before.

5th day.—Has had no stool. Has not taken any medicine this morning, none having been procured from the Dispensary. A dose to be taken immediately, and repeated every two hours until a movement be procured.

6th day.—Has taken all the mixture without effect. In other respects as before.—*Habeat pilulæ ex aloe c colocynthide gr. x 2da. quaque hora donec responderit alvus—Repr. alia.*

7th day.—Had a copious motion last evening and one this morning; reported to be lumpy, but not of a bad colour. Appetite improved, having asked for food, which he has not done for some time past.—*Contin. pil. ex calomelane, et mist.*

8th day.—Has had one motion, lumpy, and in small quantity; passed a restless night, waking as usual at two, and seldom sleeping afterwards; feet frequently become cold. Complains more of his head and of sickness. His

moaning is still as loud and unceasing as ever, and his utterance as imperfect, and the rigidity of the body and lower extremities continue.

9th and 10th days.—Has had a stool daily of not a bad colour ; other symptoms as before.

11th, 12th, 13th and 14th days.—Has taken the aloetic pills ordered before, and the mixture, and pills with calomel, as usual. Has had two dark stools daily, some of which were copious. No distinguishable improvement. The moaning and rigidity as usual.

15th day.—Has had three stools this morning, which, for the first time, have been mixed with slime. One of the motions was copious, and of a yellowish green appearance ; the slime in it was quite tenacious, and admitted of being separated and washed in one undivided mass. Takes his food much better, sleep much disturbed, but the moaning is rather less loud.

16th day.—Slept remarkably well last night. In other respects is much the same, but moans less. Has had three stools, which are of a better colour, but slimy.

17th day.—Had an indifferent night, but has not moaned since he awoke. Was able to be bent into a sitting posture yesterday, and acknowledges himself to be better. Has had one stool of a black green colour and slimy.

18th day.—Slept indifferently. Has had one

stool of a better colour. Continues to acknowledge himself better; sat up for about half an hour.

19th day.—Slept well last night. Had a stool early this morning of a better colour. Appetite good; sat up for two hours, assisting himself better. Takes still but little interest in any thing around him.

20th day.—Passed a very good night. Two stools of an improved appearance. In other respects is also better.

21st day.—Did not pass so good a night. Parted with a dark and green loose motion, highly offensive; always strains two or three times ineffectually before having such stools; acknowledges himself to be better, and speaks decidedly better. His countenance denotes that he takes some interest in what is said and done.

22d, 23d, 24th and 25th days.—Has continued to improve. Sits up every day for some hours, and has walked across the floor with assistance. Has had two or three stools daily, some of which were offensive and lumpy, but the colour of the others have become much improved. Appetite good, pulse natural, sleeps well. His speech, though much improved, is still very imperfect, which arises, he informs me, from his tongue feeling heavy, and his be-

ing unable to move it readily. During the month of April, he gradually recovered his flesh and strength, and was able to walk out unassisted. He afterwards went into the country, and is now (September) in the entire possession of his speech and faculties, and perfectly strong and healthy.

SECTION III.

THE next, and last series of cases, will consist of the two forms of the disorder, as it is met with in the adult.

The first, is an exceedingly well marked instance of the disorder, as it is found to run on its course when neglected or mismanaged; beginning first, suddenly, in the acute, and terminating in the chronic form. This case, when it came under my care, had existed eighteen months, and had been treated sometimes as a disease of the liver, by venæsection and active purging, and at other times by cinchona, as a case of debility of the stomach; and though none of these modes were calculated to remove the complaint, yet it is worth observing, the latter plan appeared to the patient to afford him the most relief.

The second is a case also of the acute form, and was treated, like the first, as an inflammatory affection of the liver, by very copious bleedings.

The third, is an example of the disorder, accompanied with the bilious cough, assuming so much of the appearance of phthisis pulmonalis, as to lead the gentleman, who preceded me, to regard and treat it as such.*

The fourth, and last, is an instance of the disorder in a female, and which terminated, at the end of three months, in hæmatemesis. This case affords a good example of the disorder, and illustrates at once the view which has been given of the origin and causes of this hemorrhage, and of the power which calomel possesses of arresting the discharge, by renewing the secretion of the liver. During the period of her indisposition, the fœcal discharge was stated to resemble the colour of soot, becoming more natural as she advanced to a state

* In these, as well as in the foregoing cases, I have suppressed the names of the patients where they occurred in my private practice, or where I have been obliged to notice the plan of treatment previously pursued. In a provincial town this is necessary ; for, though the interests of truth demand, in argument, the most unreserved examination of errors, there is no advantage, which a liberal mind could desire to derive, from censuring an individual who commits them.

of convalescence ; for, though no blood was apparently passed by stool during the period of the vomiting, yet the unnatural state of the fœces was undoubtedly owing to the admixture of a portion of blood.

Of these four cases, two, it may be observed, had been considered and treated as inflammatory affections of the liver. The venæsection employed, was considered by the patients as rendering them worse. In this they might be mistaken, though that it did not render them better is evident.

The acute inflammation of the liver, according to my observation, is comparatively a rare disease. When occurring, it demands for its relief, among the other strictly antiphlogistic means, the most active depletion by the lancet; for it differs in nothing from the inflammatory affection of other internal organs. And here I must observe, that I cannot help differing in opinion from those, who esteem the exhibition of calomel to be useful in frequently renewed doses, in the treatment of inflammation of the liver, from the power it possesses of promoting the secretion of the bile. The practice is avowedly founded on the well known benefit which is derived from evacuating the female breast, when affected with an inflammatory congestion. But there is but little anal-

ogy between the cases. The congestive vessels of the female breast, are those whose office it is to secrete, and whose direct evacuation is therefore produced by a renewal of the secretion. But the vessels, engaged in the inflammatory state of the liver, have no secretory office to perform, and can be only very partially relieved from their congestive state by the freest secretion of bile. In the inflammatory state of the breast, the secretion is stopped, whilst this is by no means necessarily the case in that of the liver. In those cases, in which calomel has been employed with the particular view of promoting biliary secretion, and where it was thought to be so successful, as to render the employment of frequent venæsection unnecessary, I cannot help suspecting, there may have been some error; the symptoms attendant on a venous congestion of the liver, having, as in these cases, been probably mistaken for those of inflammation. Under such circumstances, the practice would indeed be efficient, and would prove the means of rendering all other evacuations unnecessary. But should calomel be exhibited in actual inflammation of the liver, and at the same time, be in any degree trusted to, on account of its property of promoting the secretions of that organ,

there can be little hesitation in affirming that the event would be disastrous.

But on this point I could desire to guard against misconception ; and I must therefore add, that, though I cannot regard calomel to be useful in acute hepatitis, by its promoting a secretion of bile, yet it has a powerful effect upon the inflammatory affections of internal organs, and among others of the liver, when combined with opium and the tartrate of antimony, and given to act upon the system, according to the mode first recommended by that excellent practical physician, Dr. R. Hamilton, of Lynn Regis. When given in this form, its power, in subduing these affections, is often striking, as I have frequently witnessed. But its operation is never beneficial in these cases, until the medicine has slightly affected the mouth ; when almost at the instant this latter affection occurs, it appears to act like a charm, the inflammatory affection becoming at once subdued by it. But, though thus powerfully acting in removing inflammation, it is not to be relied on, or recommended as a general remedy in their treatment ; for these diseases demand an immediate remedy, and the ptyalism, which the medicine is required to produce before it acts upon them, cannot always be early, and at the same

time safely, brought on, and any delay in such cases may be fatal.*

From the foregoing views, therefore, it is intended to be inferred, that venæsection is indispensable in the inflammatory affections of the liver, and calomel, as a means of promoting the secretions of the liver, is only to be used subordinately ; whilst in the venous congestion of the liver, brought on by an interruption in its secretory function, and sometimes inducing a hemorrhage from that organ, constituting the melaena or hæmatemesis, venæsection is unnecessary and useless ; calomel being, by its power of renewing the biliary secretion, and thus removing its cause, the

* In the treatment of dysentary, the combination of calomel with opium, may be esteemed almost a specific ; its power in subduing the morbid action of the liver, and of the mucous membrane lining the intestines, constituting this disorder, being indeed extraordinary. But in exhibiting this medicine, it is necessary to affect the mouth, as it is not until this proof is afforded of its action on the system, that it succeeds in subduing the disease. As soon as this takes place, however, there is an almost instantaneous improvement visible. A few years ago, a dysentary, following the cholera morbus, prevailed extensively in this place, and at that time I combined ipecacuanha with the opium and calomel ; but, considering the latter to be the efficient medicine, I have omitted of late the use of the former as unnecessary.

efficient remedy for it, and in many cases the only one required.

In the watchfulness, which often forms so distressing a symptom of the acute stage of the disorder, there is something peculiar, and meriting observation. In two of these cases it was so excessive, and so greatly disproportioned to the degree of pain or fever, as to shew that it did not originate from them. In many of these cases, indeed, there is sometimes the utmost horror felt at making the attempt to procure rest by lying down in bed; the general restlessness, and nervous agitation, being greatly aggravated by it.

In a few instances of paralysis, arising from, or, perhaps, accidentally combined with this disorder, I have seen this watchful state so considerable, as to be accompanied with a nervous irritability, bordering on mania. In an example of this kind, which I had under my care some time since at the Dispensary, there had been symptoms of the biliary derangement previous to an attack of hemiplegia, and which so increased after this last complaint, that the patient was never in bed for twenty-three nights, and was said to have rarely slept during that period; but to have exhibited, as each night returned, the most

distressing symptoms of nervous, and almost maniacal agitation. Having tried the effects of powerful doses of the tinctura opii to procure him rest, and finding them not only unavailable but injurious, I was led to inquire more particularly concerning the appearance of the alvine discharge; and learning that though passed regularly, it was of a yeasty colour, I examined his body, and was for once gratified by finding a distinct circumscribed tumor seated in the epigastric region, and considerably tender on pressure. The cause of the excessive watchfulness and nervous agitation, and which I had erred in overlooking, was now explained, and was happily, within the reach of a remedy. By correcting the disorder of the liver, the patient, in fact, was enabled in a few nights to lie down; and, though subject occasionally to restlessness, has never since either required an opiate, or been absent a night from his bed. Whether in this case the paralytic affection, as well as the nervous irritability which attended it, derived its origin from the biliary derangement, it is difficult to decide. In another part of this essay, I have noticed a case where such a connexion appeared to exist, and in children they confessedly thus stand to each other in the relation of cause and effect. But it is

not necessary, in these cases of extreme disorder of the nervous system from biliary derangement, to attempt an explanation of its cause, by having recourse to the supposition, that the paralytic affection itself originated from it ; for it may be reasonably concluded, that to those diseased, though not always discoverable states of the brain, existing in paralysis, a morbid and sympathetic irritation will prove unusually injurious, and give rise to a degree of nervous irritability, which would not have been produced under a more healthful or more vigorous condition of the brain.

CASE I.—*Thomas Jackson, aged 37, from the Country, admitted March 30th a patient of the Dispensary.*

Complains of great weariness, listlessness and dizziness, and of an aching of the knees and ankles. Appetite craving, but feels no better for the food which he eats, having always a sinking feeling at the stomach, tongue foul, bowels costive, pulse full, but of natural frequency, complexion sallow, urine of a pale colour, sleep much disturbed and broken by dreams, being seldom able to sleep after having been awake by one. Is very much reduced in his flesh and strength ; feels himself best of a morning, becoming more unwell as

the evening comes on. Has been ill during the last eighteen months, and was seized suddenly, at first, when in bed, feeling as if, to adopt his own language, all his passages were stopt, and was obliged to rise and walk about the chamber during the rest of the night. Was seldom in bed for the period of three months, and rarely slept or felt the inclination for sleep. Appetite during that time was bad, and he had much thirst, and his bowels were costive. He applied for advice immediately, and was attended for three month. Was bled once during that time, and was purged very much, but without relief. Was never regular in his bowels but when taking physic, and then open to excess. The alvine discharge was always black. Finding that he received no benefit from his first medical attendant, he consulted others, and was blistered five times, and bled from the arm four times and once in the temples for the dizziness, but always felt himself worse after these evacuations. By one practitioner, he was ordered bark, and he thought himself a little relieved by it. Has not done any work for the last twenty weeks, and before that period seldom worked more than one or two half days in the week.

Having ordered him a dose of calomel at bed-time, with an aperient draught on the

following morning, and given the necessary directions for his increasing or lessening the doses of his medicines, as circumstances should require, he returned into the country, coming up to see me once a week. After some time, a tonic medicine was given along with the other medicines, and, at the expiration of seven weeks, he was so well, that his medicines were discontinued, and he came at the end of another month to inform me, that he had continued free from complaint since the time of my last seeing him, and had been able regularly to follow his work as a labourer.

CASE II.—*John T. aged 62, sailor, admitted May 14th a patient of the Infirmary.*

Complains of an acute pain at the pit of the stomach and on the left side, which is worse towards evening and during the night, and is troubled with a severe cough, loss of appetite, throwing up the little food that is taken, profuse perspirations when in bed, excessively disturbed sleep, and a sense of great weariness and aching of the knees and ankles during the day, and is much reduced in his flesh and strength, pulse of natural frequency, but feeble, tongue foul, bowels costive, water high coloured and scanty, complexion sallow, and countenance depressed. Has been ill during

the last four months, but worst during the last two; and has been bled, under the direction of a medical attendant, five times, and thought himself worse for it, and blistered four times, with only slight relief to the pain. The blood had a slightly greenish tinge. Has never enjoyed good health since he was shipwrecked eight years ago.—*Habeat calomelanos gr. i. omni nocte et sulphatis magesiæ ʒ iss. ex aquæ ʒ ij. omni mane.*

3d day.—Had four copious black and slimy stools yesterday, cough and appetite better to-day, and has had no vomiting, slept better last night, and was less disturbed by dreams, and had no perspiration, pain at the pit of the stomach less severe, and feels himself better in all respects.—*Contin. med.*

8th day.—Has passed two and three stools daily, which were completely black and very foetid. Appetite much improved, the cough is still troublesome during the night, and has some thirst.—*Continr. med. habeat elixir vitriolici gtts. xij. ex aqua bis in die.*

14th day.—Has had two or three motions daily. Is very much better, eats and sleeps well, cough much better, and no pain in the region of the stomach or in the side, water still turbid.—*Contin. med.*

17th day.—Two motions daily, of a natural colour, but rather slimy, sleeps tolerably well but perspires a little, appetite good, cough better, continues to feel weak, with some remains of the aching in the knees and ankles.

20th day.—Eats and sleeps well, bowels regular, and their contents natural. Has no pain about the seat of the stomach, tongue clean, but still rather dry in a morning on first waking.—*Omittr. elix. continr. pil. et mist.*

24th day.—Dismissed, free from complaint.

CASE III.—*William D. aged 37.*

Complains of a most acute pain in the region of the stomach, which is worse in the recumbent posture, and is slightly relieved by bending forward. Has a troublesome cough, attended with a slight degree of dyspnœa and some little expectoration. Pulse preternaturally quick, bowels stated to be regular, the tongue furred, and the water thick and high coloured and scanty, appetite entirely gone, and the smell of food sickening. The nights are passed in the chair and without sleep, as his sleep, to use the patient's own expression, is quite gone from him; for, when not in pain, is still unable to rest. Has become much reduced in flesh and strength, and has much pain and aching about the knees and ankles; the

complexion is sallow, and the countenance languid. Has been indisposed during the last two months, and been particularly worse about ten days. Is taking at present a medicine, containing an opiate for the cough, and an aloetic pill to keep the bowels regular.—*Habetur calomelanos gr. i. hora somni et haustum ex sulphatis magnesiæ mane sequente.*

2d and 3d days.—Bowels but little acted on. Symptoms unrelieved. The present aperient draught to be substituted for one containing the infusum sennæ.

4th day.—Bowels been relieved, alvine discharge dark and very fœtid, cough and other symptoms relieved, but still sleepless, and spending much of the night in his chair.

5th day.—Been plentifully moved, fœces very dark and fœtid, pain abated, water clear, the disgust at the smell of food less considerable, cough gone.

6th day.—Pain removed considerable lower down, bowels freely moved, and the fœces of a better colour. Has taken some food, spent much of the night in bed, looks much improved.

7th day.—Very considerably relieved in all his symptoms, no pain at the stomach, but some still in the bowels, slept well last night.

8th day.—Had a bad night and not so well to-day, which is attributable to some improp-

er food taken yesterday.—*St. calomelanos gr. ij. hac nocte.*

9th, 10th, 11th and 12th days.—Continues to improve rapidly, eating and sleeping as in health, the bowels becoming natural and tongue clean. The medicines were omitted, and a tonic mixture was taken for a short time, until his full recovery rendered it unnecessary.

CASE IV.—*Charlotte Turner, admitted a patient of the Dispensary October 14th.*

Three days since, began to be affected with a vomiting up of blood, which still continues, having thrown up from a quarter to nearly half a pint each day. The quantity discharged is commonly brought up at once. Is constantly sick at other times, and throws up whatever she takes, but without an admixture of blood. The bowels are costive, appetite extinguished, sweats much during the night, has thrown up a quarter of a pint of blood this morning, and threw up some in the night, has some difficulty in passing her water, which is high coloured and turbid, has considerable pain in the head, sleep very much disturbed, the feet particularly cold, tongue foul, pulse rather quicker than natural. About three months ago, took cold when the catamenia were present, by which they were stopt, and

she became immediately ill. During three weeks, she was troubled with a looseness, and after that period she became costive, having for a short time a craving appetite, with constantly a sinking feeling at the stomach; was listless, and languid and spiritless, and so drowsy as to fall asleep over her work. Her knees ached and her sleep was unrefreshing, and she was much disturbed by dreams. Was always worse towards the afternoon, and frequently chilly in the day. Has wasted in her flesh and strength. About three weeks since, these symptoms became worse, having been constantly sick of late. About eleven years ago was affected in a similar way with a vomiting of blood, and was ill during ten months; and was repeatedly bled, during that time, for her complaint, and so often, on one occasion as three times during the same day. The fœces at that time were always black. Having directed for her the medicines, which I have noticed as employed by me in the cholera morbus, and ordered an aperient draught to be taken some hours after finishing her pills, the following is the report.

3d day.—Did not take her pills regularly, having taken only four or five of them on the day they were ordered, and the remainder on the following one. Threw up some blood

each day, and this morning the quantity was considerable. The nausea and retching, and other symptoms, continue, and has a considerable stoppage in her water. Has had no movement.—*Hab. pulv. jalapiæ gr. xv. ex calomelanos gr. ij. statim.*

4th day.—Has been freely moved in the night. The motions are of the colour of soot. The sickness and other symptoms are unrelieved. Has thrown up considerable quantities of blood this morning.—*R. calomelanos gr. vi. micæ Panis q. s. ft. pilulæ xii. e quibus St. i. 2da. quaque hora.*

5th day.—Has taken all the pills but three, and has not thrown up since she began to take them. Has not had so good a night before for some time past. The oppression about the stomach and nausea, and the other symptoms, are very much relieved. Had two stools yesterday, which were perfectly black.—*Continr. pil. 4ta. quaque hora.*

6th day.—Has had no farther sickness, and took yesterday some food, which she relished and kept down for the first time during the last three weeks. Has some slight soreness of the mouth. Bowels costive.—*Hab. mixturæ aperient. ℥j. 2da. quaque hora donec responderit alvus—St. pilulam unam mane nocteque.*

7th day.—Passed three stools in the course of the night of an improved appearance. Has had no farther discharge of blood, and has had a pretty good night. Takes food and relishes it, and is quite free from nausea and oppression at the stomach.—*Contr. pil.*—*mist. et aperient.*

8th day.—Has not had so good a night, having had some pain in her bowels. In all other respects is very much better, being free from sickness; and is capable of taking, and keeping her food. Had several stools last evening, which were slimy, but of a much better colour. Her mouth is very sore.—*Omittr. pil.*—*Contin. mist. aperient.*

On the following days, this patient continued to improve, the appetite becoming much better, and the appearance of the alvine discharge more natural, and in a short time she became free from complaint.



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ERRATA —Page 48, line 12, for disposition, read deposition. P. 92 l. 23, for progress, read process. P. 122, l. 28, for vacate, read violate. P. 136, l. 29, for higher, read tighter. P. 159, l. 9, for pursued, read purposed. P. 175, l. 9, for necessary, read unnecessary.

